Initiative "AI & Ocean" 2024-2027
PPR Océan & Climat

https://www.ocean-climat.fr/Le-PPR/Actualites/Intelligence-artificielle-Appel-a-postdoc-et-data-challenges

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PPR Océan & Climat

(French Research Program on Ocean & Climate**)**

Coordination CNRS/Ifremer :
Dr. W. Sanchez, Dr. B. Blanke

President of the Scientific Board: Dr. Y. Shin

Actions et projects supported by the program:
- Projets de recherche (CLIMARCTIC, FUTURE-OBS, MEDIATION, RIOMAR, FUTURISKS, LIFEDEEPER)
- AAP thèses
- RSL
- Nouvelles actions Postdocs : IA-Océan, Solutions fondées sur l'océan

PROGRAMME PRIORITAIRE DE RECHERCHE OCÉAN & CLIMAT 2021—2027

https://www.ocean-climat.fr/

Initiative "AI & Ocean"

Scope: https://www.ocean-climat.fr/Le-PPR/Actualites/Intelligence-artificielle-Appel-a-postdoc-et-data-challenges

Scientific and technological challenges targeted:
- "AI-native" approaches in the Digital twins of the Oceans
- Better exploitation of the potential of observation and simulation data
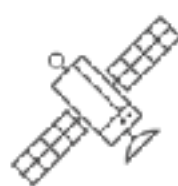- Acceleration and portability of numerical codes

Scientific Approach:
- Structuring through "open" and "at-scale" ML-ready data challenges (benchmarks)
- Benchmarking of AI-native schemes vs. Operational systems
- Exploration of multiple solutions for each data challenge (postdocs)

Integration in the framework of the European Digital Twin of the Ocean platform (EDITO)

Coordination : R. Fablet (IMT Atlantique), Y. Drillet (MOi), D. Durand (Covartec), Y. Shin (IRD)

Supporting resources dédiés :
- Scientific and technological expertise of Ifremer, IMT Atlantique and Mercator Ocean International
- 2 research engineers to support the design and implementation of data challenges
- Up to 9 two-year postdoctoral fellowships (starting during fall 2025)

Initiative "AI & Ocean": Ocean Data Challenges

https://github.com/ppr-ocean-ia/data-challenges-info

Scientific coordination: R. Fablet, IMT Atlantique/Odyssey

Technological coordination: Q. Febvre (Ifremer/Odyssey), K. Ait Mohand, G. Cossio (IMT Atlantique/Odyssey), XXXX (Mercator Ocean Intl)
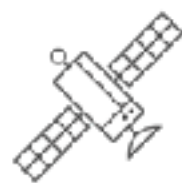
Selected Data Challenges
- **DC1. Emulation of Global Ocean Reanalyses**
  - Scientific lead: Dr. J. Le Sommer (IGE), A El Anoui (Moi), S. Ouala (Odyssey), A. Storto (CNR)
- **DC2. Probabilistic short-term forecasting of global ocean dynamics**
  - Scientific team: L. Drumetz, F. Sévellec (Odyssey), Le Sommer (IGE), S. Metref (Dallas)
- **DC3. Arctic Sea Ice Forecasting**
  - Scientific team: S. Metref (Datlas), P. Rampal (IGE), J. Brajard (NERSC)
- **DC4. High-resolution monitoring and forecasting of tropical cyclones**
  - Scientific team: Q. Febvre, A. Mouche, B. Chapron (Ifremer//Odyssey)
- **DC5. Marine Biodiversity Prediction**
  - Scientific team: J.O. Irisson (LOV), L. Guidi (LOV). D. Mouillot (Marbec), A. Joly (LIRMM)

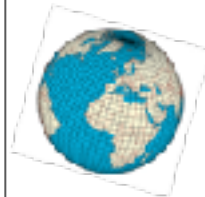***Targeted Distribution Date:*** September 2025

GIT organisation: ***https://github.com/ppr-ocean-ia***

How to folllow? How to contact?

Contact: Ronan Fablet, IMT Atlantique

Email: ppr_oc_pilotes_ia@cnrs.ifremer.fr

Webpage: https://www.ocean-climat.fr/Le-PPR/Actualites/Intelligence-artificielle-Appel-a-postdoc-et-data-challenges

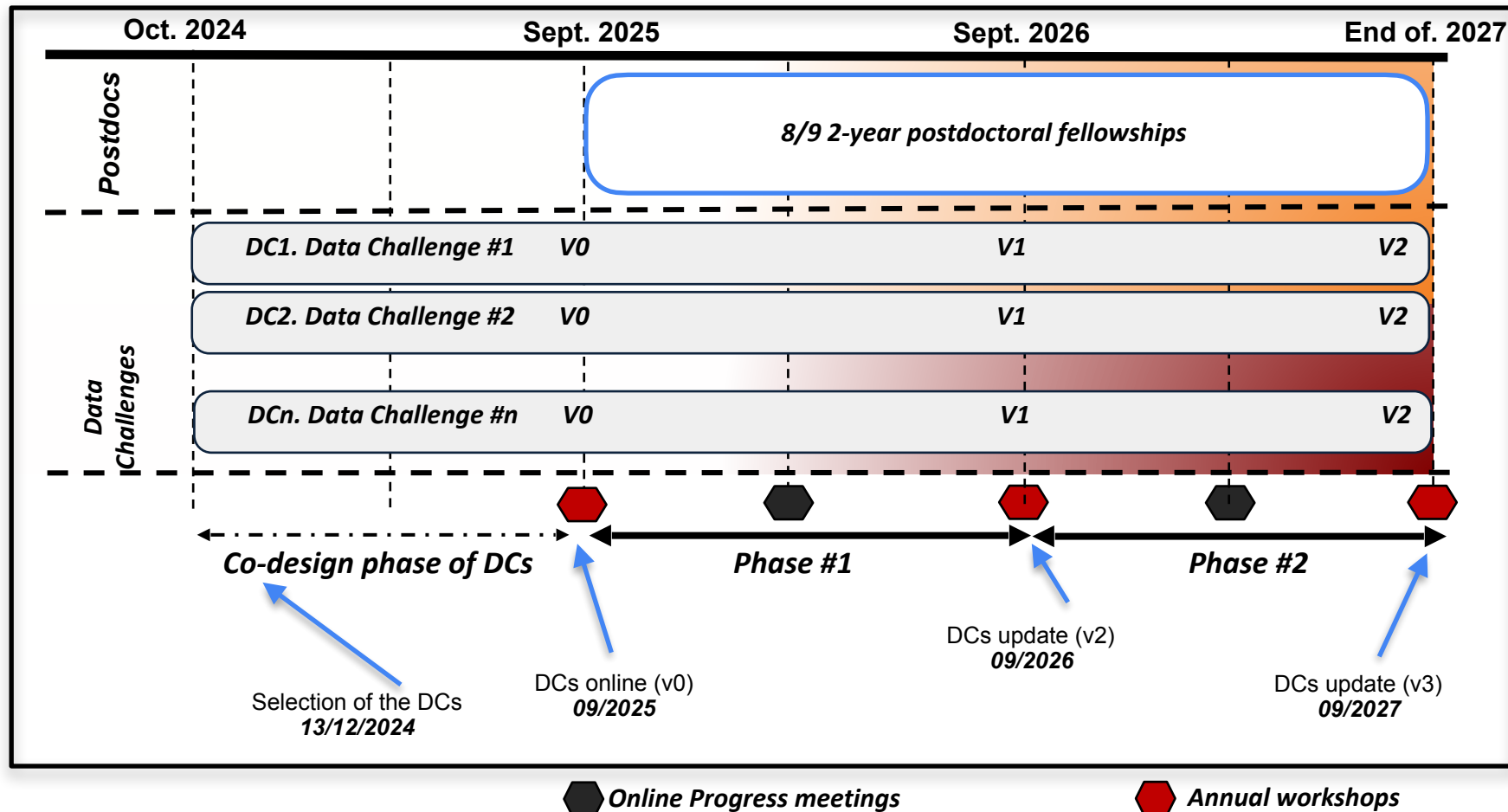**Mailing list**: ppr_ocean_climat_ia@cnrs.ifremer.fr

S**lack workspace "ppr-ocean-climat-ia"**

Git organisation: https://github.com/ppr-ocean-ia

Annex.

Timeline of the initiative

Ocean Data Challenge Timeline

Oct. 2024   Sept. 2025   Sept. 2026   End of. 2027

Postdocs

8/9 2-year postdoctoral fellowships

Data Challenges

DC1. Data Challenge #1   V0   V1   V2

DC2. Data Challenge #2   V0   V1   V2

DCn. Data Challenge #n   V0   V1   V2

Co-design phase of DCs   *Phase #1*   *Phase #2*

Selection of the DCs
13/12/2024

DCs online (v0)
09/2025

DCs update (v2)
09/2026

DCs update (v3)
09/2027

⬢ *Online Progress meetings*   ⬡ *Annual workshops*

Postdoc Fellowship Timeline