

## DRAKKAR WORKSHOP 2017 – FINAL AGENDA (updated: 3 January 2017)

**Time for presentations.** Unless specified, **Talks are 20mn: 15mn for presentation and 5mn for discussion/questions.** Since the workshop aims to preserve discussion time, you must **be strict on the 15mn presentation time.**

Monday 16 January

**8h30-8h50: Welcome (with coffee and pastries)**

**8h50-9h00: Introduction**

### **SESSION 1: Benefits of high resolution to the science made with ocean/sea-ice models**

**9h00-10h30: 4x20mn talks – Convener: Thierry Penduff**

*North Atlantic. Rapporteurs: Torge Martin & Guillaume Mazé*

1. **Yevgeny Aksenov (NOC - Southampton):** Arctic Pacific water dynamics from model inter-comparison and observations.
2. **Paul Myers (U Alberta - Edmonton):** Pan-Arctic Exchange, the Labrador Sea and the AMOC
3. **Claudia Wekerle (AWI - Bremerhaven):** Eddy-resolving simulation of the Atlantic Water recirculation in the Fram Strait.
4. **Clark Pennelly (U. Alberta - Edmonton):** Numerical modeling in the northern Atlantic: Labrador Sea freshwater and model sensitivity to atmospheric forcing.

**10h30-11h00: coffee break**

**11h00-12h30: 4x20mn talks – Convener: Klaus Getzlaff**

*Southern and Global Ocean. Rapporteurs: Torge Martin & Guillaume Mazé*

5. **Nicolas Jourdain (IGE – Grenoble):** Impact of ice-shelf melt on the Amundsen Sea circulation and sea-ice.
6. **Lavinia Patara (GEOMAR – Kiel):** Southern Ocean eddy activity and transient tracer uptake in the past 50 years in eddy-rich ocean simulations.
7. **Nacho Merino (IGE – Grenoble):** Impact of increasing Antarctic glacial freshwater release on regional sea-ice cover in the Southern Ocean.
8. **Joël Hirshi (NOC – Southampton):** On the persistence of mesoscale features in satellite altimetry and ORCA12.

**12h30-14h00: Lunch**

**14h00-15h30: 4x20mn talks – Convener: Claude Talandier**

*Submesoscale permitting resolution. Rapporteurs: Joël Hirshi & Thierry Penduff*

9. **Clément Rousset (LOCEAN-Paris, 10 mn):** LIM3 (expected).
10. **René Schubert (GEOMAR – Kiel):** Prevalence of Instability-Driven Benthic Storms in the Western North Atlantic.
11. **Eric Chassignet (FSU – Tallahassee, 30 mn):** Global 1/12° HYCOM interannual simulation with Drakkar atmospheric forcing and Impact of horizontal resolution (1/12° to 1/50°) on Gulf Stream separation and penetration in a series of North Atlantic numerical simulation.
12. **Julien Le Sommer (IGE- Grenoble):** Sensitivity of resolved fine scales to model parameters in the submesoscale range: lessons from NATL60.

**10h30-11h00: coffee break**

### **SESSION 2: Atmospheric driving of eddying OGCMs**

**16h00-17h30: Session 1 - 4x20mn talks – Convener: Laurent Brodeau**

*Rapporteurs: Adam Blaker & Florian Lemarié*

13. **Alex Megann (NOCS - Southampton):** Evaluating Forcing Datasets for late 20<sup>th</sup>-Century NEMO integrations.
14. **Gilles Garric (Mercator Océan – Toulouse):** Evaluation of 7 atmospheric datasets in the Arctic Ocean over the period 2007-2014.
15. **Rafael Abel (GEOMAR – Kiel):** Feedback of mesoscale ocean currents on atmospheric winds in high-resolution coupled models and implications for the forcing of ocean-only models.
16. **Lionel Renault (UCLA):** Surface current feedback: which strategy is the best to force a high-resolution ocean model?

**17h30-18h30: Discussion No1 - Lead: Anne Marie Tréguier.**

Focus: Lessons learned from high resolution simulations. The discussion will be introduced by a 10mn presentation from:

**Anne Marie Tréguier (LOPS- Brest):** Lessons learned from global mesoscale-resolving modelling: a personal view.

**19h00: Diner at NoName Café**

Tuesday 17 January

### SESSION 3: The eddy-permitting regime

#### 9h00-10h30: Session 3 - 4 x20mn talks – Convener: Qiang Wang

*¼° chaotic variability. Rapporteurs: Alex Megann & Lavinia Patara*

17. Graeme MacGilchrist (U. of Oxford): Characterising chaotic ventilation of the ocean.
18. Stephan Juricke (U. of Oxford): The Random Ocean: Development, implementation, and investigation of stochastic ocean parametrizations.
19. Guillaume Sérazin (LEGOS – Toulouse): A global probabilistic study of the Ocean Heat Content low-frequency variability: atmospheric forcing versus oceanic chaos.
20. Thierry Penduff (IGE – Grenoble): Atmospherically-modulated oceanic chaos; observational implications.

10h30-11h00: coffee break

#### 11h00-12h30: Session 3 - 4x20mn talks – Convener: James Orr.

*¼° dynamics. Rapporteurs: Lavinia Patara & Alex Megann*

21. Jan Klaus Rieck (GEOMAR – Kiel): Decadal Variability of Eddy Kinetic Energy in ORCA025 - Sensitivity Studies
22. Guillaume Maze (LOPS - Brest): Eddy-permitting ORCA025 representation of large-scale stratification features in the North-Atlantic.
23. Jens Terhaar (LSCE-IPSL – Orsay): Simulated anthropogenic carbon in the Arctic Ocean in three DRAKKAR model configurations.
24. Julie Deshayes (LOCEAN - Paris): On the ORCA025 configuration at IPSL for use in ESM.

12h30-14h00: Lunch

#### 14h00-15h00: Discussion No2 – Lead: Claus Boning.

Focus: Eddy-permitting models: skills and resisting flaws; priorities for improvements; when and how should we use/not use them?

### SESSION 4 - OGCM evolution for basin-scale to global eddying simulations: processes and setups

*Processes. Rapporteurs: Nicolas Jourdain & Yevgeny Aksenov*

#### 15h00-15h30: Session 4 - 1x20mn Talk – Convener: Rym Msadek

25. Camille Lique (LOPS – Brest): On the importance of vertical mixing for simulating the Arctic Ocean and sea ice states.
26. Pierre Rampal (NERSC – Bergen): On simulating sea ice with the new fully Lagrangian model neXtSIM.

15h30-16h00: coffee break

#### 16h00-18h00: Session 4: 5x20mn talks– Convener: Paul Myers

27. Qiang Wang (AWI - Bremerhaven): Arctic-Subarctic Ocean fluxes: mechanisms and oceanic linkage.
28. Torge Martin (GEOMAR – Kiel): What to consider for a high-resolution Enhanced-Greenland-Runoff simulation with NEMO.
29. Marion Donat-Magnin (IGE - Grenoble): Impact of interactive ice-shelves on the ocean response to the SAM trend, and possible feedbacks with the ice-dynamics.

Pause 10mn

30. Pierre Mathiot (UKMO – Exeter): Attempt to separate effects of horizontal resolution and bathymetry resolution using eORCA12 and eORCA025.
31. Pedro Colombo (IGE - Grenoble): Denmark Strait overflow in NEMO: does the type of vertical coordinate matters?

18h00: End of day

Wednesday 18 January

#### SESSION 4 - OGCM evolution for basin-scale to global eddying simulations: processes and setups

*Modelling and simulation practices. Rapporteurs: Julie Deshayes & Pierre Mathiot*

##### 9h00-10h30: Session 4 : 4x20mn – Convener: Camille Lique.

32. Rémi Tailleux (U. of Reading): Conceptual issues and pitfalls associated with the use of neutral rotated diffusion tensors.
33. Mike Bell (UKMO – Exeter): Spurious baroclinic instabilities on the Lorenz grid.
34. George Nurser (NOC – Southampton): Upper-ocean mixing by Langmuir circulations: implementing the OSMOSIS Ocean Boundary Layer Model into NEMO.
35. Klaus Getzlaff (GEOMAR – Kiel): A series of AGRIF configurations based on NEMO 3.6 using LIM2.

10h30-11h00: coffee break

##### 11h00-12h00: Session 4: 3x20mn – Convener: Chris Roberts

36. Helene Hewitt (UKMO – Exeter): Ocean models for seamless prediction.
37. Laurent Brodeau (BSC-Earth Science – Barcelona): NEMO optimization at BSC.
38. Clément Bricaud (Mercator Océan – Toulouse): On-line coarsening in NEMO: state of the art.

##### 12h00-15h00: Discussion No3 - Lead: Julien Le Sommer

- NEMO

12h30-14h00: Lunch

- Present and future simulation practices with Drakkar configurations
- Recommendation for Drakkar eddy resolving configurations in 2016 and on studies for which coordination is desirable,
- Recommendation of forcing,
- Next Drakkar workshop and meeting conclusions.

#### SESSION 5 – Ocean-wave model coupling

##### 15h00-18h00: Session 5 - 5x20mn + 1x30mn talks – Convener: George Nurser

39. Fabrice Ardhuin (LOPS – Brest, 25mn): Wave interactions with ocean circulation and sea ice, from a wave perspective.

15h30-16h00: coffee break

40. Xavier Couvelard (LOPS – Brest): Toward improving oceanic forecasts through ocean and waves coupling.
41. Øyvind Breivik (NMI - Bergen): WAVE2NEMO: forcing a regional high resolution NEMO model with WAM fluxes and fields.
42. Stéphane Law-Chune: (Mercator Océan – Toulouse): NEMO forced with MFWAM wave model at Mercator Océan.

Pause 10 mn

43. Emanuela Clementi (INGV – Bologna): NEMO-Wave coupling Working Group: overview and last achievements.
44. Yevgeny Aksenov (NOC - Southampton): Modelling the waves, ocean and ice - A golden key to the future Arctic projections?

18h00: End of meeting

Thursday 19 January

##### 9h00-12h30: NEMO-WAVE Working Group Meeting. Convener: George Nurser.

The meeting will be held in the building of the MEOM Group, in room 103 (first floor).  
See Map.

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**Role of session rapporteurs:**

There are 2 session rapporteurs for each session.

Their task is to write together a short report with the highlights of the session as well as a synthesis of the relevant discussion items addressed in the corresponding session discussion.

The report will be sent to Anne Marie Treguier who will edit the final report of the workshop.

See last year report at:

<https://www.drakkar-ocean.eu/meetings/reports/drakkar-2016-meeting-report>

**Role of Discussion Leaders:**

They are in charge to organize and lead the discussion that follows the session and review the draft report of the session rapporteurs.

**Role of Discussion Secretaries:**

They are in charge to report on organize and lead the discussion that follows the session and review the draft report of the session rapporteurs.

**Role of Sessions Conveners:**

They are in charge to convene the session, and make sure that presentations (including turnover time and a few questions) do not exceed the time allowed ( $\leq 20$ mn for most).

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