

Références

- Alvera-Azcárate, A. (2003). Modelling the barotropic response of the global ocean to atmospheric wind and pressure forcing - comparisons with observations. *Geophys. Res. Lett.*, 30 :doi :10.1029/2002GL016473.
- Andreu Burillo, I., Caniaux, G., Gavart, M., De Mey, P., and Baraille, R. (2002). Assessing ocean-model sensitivity to wind forcing uncertainties. *Geophys. Res. Lett.*, 29(18) :1858, DOI 10.1029/2001GL014473.
- Arnold, C. P. and Clifford, H. D. (1986). Observing-Systems Simulation Experiments : past, present, and future. *Bull. Amer. Meteor. Soc.*, 67 :687–695.
- Auclair, F., Marsaleix, P., and De Mey, P. (2003). Space-time structure and dynamics of the forecast error in a coastal circulation model of the gulf of lions. *Dyn. Atmos. Oceans*, 36 :309–346.
- Battisti, D. S. and Hickey, B. M. (1984). Application of remote wind-forced coastal trapped wave theory to the Oregon and Washington coasts. *J. Phys. Oceanogr.*, 14 :887–903.
- Bennett, A. F. (1992). *Inverse Methods in Physical Oceanography*. Cambridge University Press.
- Bouttier, F. and Courtier, P. (1999). *Data assimilation concepts and methods*. Meteorological Training Course Lecture Series.
- Brink, K. H. (1982). A comparison of long coastal-trapped wave theory with observations off Peru. *J. Phys. Oceanogr.*, 12 :897–913.
- Brink, K. H. (1998). Wind-driven currents over the continental shelf. In Brink, K. H. and Robinson, A. R., editors, *The Sea, Vol. 10, The global coastal ocean : Processes and Methods*, chapter 1, pages 3–20. John Wiley and Sons.
- Cailleau, S. (2004). *Validation de méthodes de contrainte aux frontières d'un modèle océanique : application à un modèle hauturier de l'Atlantique Nord et à un modèle régional du Golfe de Gascogne*. PhD thesis, Université Joseph Fourier, Grenoble.
- Candela, J. and Lozano, C. J. (1994). Barotropic Response of the Western Mediterranean to Observed Atmospheric Pressure Forcing. In Violette, P. E. L., editor, *Seasonal and Inter-*

- annual Variability of the Western Mediterranean Sea*, chapter 15, pages 325–359. American Geophysical Union.
- Carrère, L. (2003). *Etude et modélisation de la réponse haute fréquence de l'océan global aux forçages météorologiques*. PhD thesis, Université Paul Sabatier, Toulouse.
- Carrère, L. and Lyard, F. (2003). Modeling the barotropic response of the global ocean to atmospheric wind and pressure forcing - comparisons with observations. *Geophys. Res. Lett.*, 30(6) :1275, doi :10.1029/2002GL016473.
- Chapman, D. C. (1987). Application of wind-forced long, coastal-trapped wave theory along the California coast. *J. Geophys. Res.*, 92 :1798–1816.
- Charney, J., Halem, M., and Jastrow, R. (1969). Use of incomplete historical data to infer the present state of the atmosphere. *J. Atmos. Sci.*, 26 :1162.
- Chelton, D. B., editor (2001). *Report of the High-Resolution Ocean Topography Science Working Group Meeting*. Ref. 2001-4. Oregon State Univ., Corvallis, OR.
- Cohen, J. E., Small, C., Mellinger, A., Gallup, J., and Sachs, J. (1997). Estimates of coastal populations. *Science*, 278(5341) :1211–1212.
- Cooper, M. and Haines, K. (1996). Altimetric assimilation with water property conservation. *J. Geophys. Res.*, 101 :1059–1077.
- Courtier, P., Freyrier, C., Geleyn, J. F., Rabier, F., and Rochas, M. (1991). The ARPEGE project at Météo-France. In ECMWF, editor, *Proc. ECMWF workshop on numerical methods in atmospheric modelling*, 2, pages 193–231. ECMWF.
- Das, S. K. and Lardner, R. W. (1991). On the estimation of parameters of hydraulic models by assimilation of periodic tidal data. *J. Geophys. Res.*, 96 :15187–15196.
- De Mey, P. (1998). Scientific Feasibility of Data Assimilation in MERCATOR. Ref. MOO-ST-431-8-MER. Toulouse, France.
- De Mey, P. (2001). The impact of high-resolution altimetry on mesoscale and coastal data assimilation. In D.Chelton, editor, *Report of the High-Resolution Ocean Topography Science Working Group Meeting.*, Ref. 2001-4, pages 43–51. Oregon State Univ., Corvallis, OR.
- De Mey, P. and Benkiran, M. (2002). A multivariate reduced-order optimal interpolation method and its application to the Mediterranean basin-scale circulation. In Pinardi, N. and Woods, J. D., editors, *Ocean Forecasting, Conceptual Basis and Applications*. Springer, Berlin, ISBN : 3-540-67964-2.
- Demirov, E., Pinardi, N., Fratianni, C., Tonani, M., Giacomelli, L., and De Mey, P. (2003). Assimilation scheme of the Mediterranean Forecasting System : operational implementation. *Annales Geophysicae*, 21 :189–204.

RÉFÉRENCES

- Devenon, J. L., Dekeyser, I., Leredde, Y., and Lellouche, J. M. (2001). Data assimilation method by a variational methodology using the adjoint of a 3-D coastal circulation primitive equation model. *Oceanologica Acta*, 24(5) :395–407.
- Durrieu de Madron, X., Castaing, P., Nyffeler, F., and Courp, T. (1999). Slope transport of suspended particulate matter on the Aquitaine margin of the Bay of Biscay. *Deep-Sea Res.*, 46 :2003–2027.
- Echevin, V., De Mey, P., and Evensen, G. (2000). Horizontal and vertical structure of the representer functions for sea surface measurements in a coastal circulation model. *J. Phys. Oceanogr.*, 30 :2627–2635.
- Essen, H.-H., Gurgel, K.-W., and Schlick, T. (2000). On the accuracy of current measurements by means of HF radars. *IEEE J. Oceanic Eng.*, 25(4) :472–480.
- Estienne, P. and Godard, A. (1970). *Climatologie*. Armand Colin, Collection U.
- Evensen, G. (1994). Sequential data assimilation with a nonlinear quasi-geostrophic model using Monte Carlo methods to forecast error statistics. *J. Geophys. Res.*, 99 :10143–10162.
- Evensen, G. (2003). The Ensemble Kalman Filter : Theoretical Formulation and Practical Implementation. *Ocean Dynamics*, 53 :343–367.
- Faucher, P., Gavart, M., and De Mey, P. (2002). Isopycnal Empirical Orthogonal Functions (EOFs) in the North and tropical Atlantic and their use in estimation problems. *J. Geophys. Res.*, 17 :10.1029/2000JC000690.
- Fu, L. and Pihos, G. (1994). Determining the response of sea level to atmospheric pressure forcing using TOPEX/POSEIDON data. *J. Geophys. Res.*, 99 :24633–24642.
- Fukumori, I., Raghunath, R., and Fu, L. L. (1998). Nature of global large-scale sea level variability in relation to atmospheric forcing : a modelling study. *J. Geophys. Res.*, 103 :5493–5512.
- Garcia-Soto, C., Pingree, R., and Valdés, L. (2002). Navidad development in the southern Bay of Biscay : Climate change and SWODDY structure from remote sensing and in situ measurements. *J. Geophys. Res.*, 107 :1–29.
- Gavart, M. and De Mey, P. (1997). Isopycnal EOFs in the Azores Current Region : A Statistical Tool for Dynamical Analysis and Data Assimilation. *J. Phys. Oceanogr.*, 27 :2146–2157.
- Gill, A. E. (1982). *Atmosphere-Ocean Dynamics*. Academic Press, London.
- Greenberg, D. A., Loder, J. W., Shen, Y., Lynch, D. R., and Naimie, C. E. (1997). Spatial and temporal structure of the barotropic response of the Scotian Shelf and Gulf of Maine to surface wind stress : A model-based study. *J. Geophys. Res.*, 102 :20897–20915.

- Hellerman, S. and Rosenstein, M. (1983). Normal wind stress over the world ocean with error estimates. *J. Phys. Oceanogr.*, 13 :1093–1105.
- Høyer, J. L. and Andersen, O. B. (2003). Improved description of sea level in the North Sea. *J. Geophys. Res.*, 108 :3163, doi :10.1029/2002JC00160.
- Huthnance, J. M. (1984). Slope currents and 'JEBAR'. *J. Phys. Oceanogr.*, 14 :798–810.
- Huyer, A. (1990). Shelf circulation. In *The sea, Vol 9 : Ocean Engineering Science*, pages 423–466. Wiley Interscience.
- Ide, K., Courtier, P., Ghil, M., and Lorenc, A. C. (1997). Unified notation for data assimilation : operational, sequential and variational. *J. Meteor. Soc. Japan*, 75 :181–189.
- Jacobs, G. A. (1998a). Sea surface height variations in the Yellow and East China Seas. 1.Linear response to local wind stress. *J. Geophys. Res.*, 103 :18459–18477.
- Jacobs, G. A., Preller, R. H., Riedlinger, S. K., and Teague, W. J. (1998c). Coastal wave generation in the Bohai Bay and propagation along the Chinese coast. *Geophys. Res. Lett.*, 25 :777–780.
- Jacobs, G. A., Teague, W. J., Riedlinger, S. K., and Preller, R. H. (1998b). Sea surface height variations in the Yellow and East China Seas. 2.SSH variability in the weekly and semiweekly bands. *J. Geophys. Res.*, 103 :18479–18496.
- Jegou, A. M. and Lazure, P. (1995). Quelques aspects de la circulation sur le plateau atlantique. *Actas del IV Coloquio Internacional sobre Oceanografía del Golfo de Viscaya*, pages 99–106.
- Jordá-Sánchez, G. (2005). *Towards Data Assimilation In the Catalan Continental Shelf*. PhD thesis, Universitat Politècnica de Catalunya, Barcelona.
- Kinnmark, I. P. E. and Gray, W. G. (1985). A generalized wave equation formulation of tidal circulation. In *Proceedings of the 4th International Conference on Numerical Methods in Laminar and Turbulent Flows*. Pineridge Press.
- Komen, G. J., Cavaleri, L., Donelan, M., Haselmann, K., and Janssen, P. A. E. M. (1994). *Dynamics and Modelling of Ocean Waves*. Cambridge University Press, Cambridge.
- Koutsikopoulos, C. and Le Cann, B. (1996). Physical processes and hydrological structures related to the Bay of Biscay anchovy. *Scientia Marina*, 60 :9–19.
- Lamouroux, J. (2002). Etude de la sensibilité d'un modèle océanique barotrope aux forçages atmosphériques dans le golfe de gascogne et le nord-est atlantique. Rapport de stage, Ecole Supérieure d'Ingénieurs de Marseille, LEGOS, Toulouse.
- Lardner, R. W., Cekirge, H. M., and Gunay, N. (1986). Numerical solution of the two-dimensional tidal equations using the method of characteristics. *Comp. Maths. with Appls.*, 10 :1065–1080.

RÉFÉRENCES

- Lavín, A., Valdés, L., Gil, J., and Moral, M. (1998). Seasonal and interannual variability in properties of surface water off Santander, Bay of Biscay. *Oceanologica Acta*, 21 :179–189.
- Lazure, P. and Jegou, A. M. (1998). 3D modelling of seasonal evolution of Loire and Gironde plumes on Biscay Bay continental shelf. *Oceanologica Acta*, 21 :165–177.
- Le Cann, B. (1990). Barotropic tidal dynamics of the Bay of Biscay shelf : observations, numerical modelling and physical interpretation. *Cont. Shelf Res.*, 10 :723–758.
- Le Cann, B. and Pingree, R. (1995). Circulation dans le Golfe de Gascogne : une revue de travaux récents. In *Actas del IV Coloquio Internacional sobre Oceanografía del Golfo de Vizcaya*, pages 217–234.
- Le Provost, C. (1991). *Generation of overtides and compound tides (review)*. John Wiley and New York sons. B. Parker.
- Le Provost, C. (2001b). Tides over ridges, shelves and near the coasts. In D.Chelton, editor, *Report of the High-Resolution Ocean Topography Science Working Group Meeting.*, Ref. 2001-4, pages 61–66. Oregon State Univ., Corvallis, OR.
- Le Provost, C. and Vincent, P. (1978). Some tests of precision for a finite element model of ocean tides. *Int. J. Numer. Methods Eng.*, 12 :853–871.
- Letellier, T. (2004). *Etude des marées sur les plateaux continentaux*. PhD thesis, Université Paul Sabatier Toulouse III.
- Letellier, T. and Roblou, L. (2001). Analyse et prédiction des hauteurs de mer à partir des données altimétriques TOPEX/POSEIDON et ERS2. Méthodes et résultats. Rapport interne au LEGOS.
- Lombard, A., Cazenave, A., Le Traon, P.-Y., Guinchut, S., and Cabanes, C. (2005). Perspectives on present-day sea level change : a tribute to Christian Le Provost. *Ocean Dynamics*, pages doi :10.1007/S10236–005–0046–x.
- Lynch, D. R. and Gray, W. G. (1979). A wave equation model for finite element tidal computations. *Computers and fluids*, 7 :207–228.
- Mourre, B. (2004). *Etude de configurations d’une constellation de satellites altimétriques pour l’observation de la dynamique océanique côtière*. PhD thesis, Université Paul Sabatier Toulouse III.
- Mourre, B., Crosnier, L., and Le Provost, C. (2006). Real time sea level gauge observations and operational oceanography. *Philosophical Transactions of the Royal Society*, 364 :867–884. DOI :10.1098/rsta.2006.1743.
- Mourre, B., De Mey, P., Lyard, F., and Le Provost, C. (2004). Assimilation of sea level data over continental shelves : an ensemble method for the exploration of model errors due to uncertainties in bathymetry. *Dyn. Atmos. Oceans*, 38 :93–121.

- Munk, W. H. and Wunsch, C. (1998). Abyssal recipes II : Energetics of tidal and wind mixing. *Deep-Sea Res.*, 45 :1977–2010.
- OSPAR (2000). Quality Status Report 2000 - Region IV : Bay of Biscay and Iberian Coast - ISBN 0 946956 50 2. In *OSPAR Commission for the Protection of the Marine Environment of the North-East Atlantic*. London.
- Persson, A. and Grazzini, F. (2005). User guide to ECMWF forecast products 4.0. *Meteorological Bulletin M3.2*.
- Pham, D. T., Verron, J., and Roubaud, M. C. (1998). A Singular Evolutive Extended Kalman Filter for data assimilation in oceanography. *J. Mar. Syst.*, 16(3-4)(C11) :323–340.
- Pinardi, N., Allen, I., Demirov, E., De Mey, P., Korres, G., Lascaratos, A., Le Traon, P.-Y., Maillard, C., Manzella, G., and Tziavos, C. (2003). The Mediterranean ocean Forecast System : first phase of implementation (1998-2001). *Annales Geophysicae*, 21 :3–20.
- Pingree, R. and Le Cann, B. (1992a). Three Anticyclonic Slope Water Eddies (SWODDIES) in the southern Bay of Biscay in 1990. *Deep-Sea Res.*, 39 :1147–1175.
- Pingree, R. and Le Cann, B. (1992b). Anticyclonic eddy X91 in the southern Bay of Biscay, May 1991 to February 1992. *J. Geophys. Res.*, 97 :14353–14367.
- Ponte, R. M. (1994). Understanding the relation between wind- and pressure-driven sea level variability. *J. Geophys. Res.*, 99(C4) :8033–8039.
- Ponte, R. M., Salstein, D. A., and Rosen, R. D. (1991). Sea Level Response to Pressure Forcing in a Barotropic Numerical Model. *J. Phys. Oceanogr.*, 21 :1043–1057.
- Robinson, A. R., Lermusiaux, P. F. J., and Quincy Sloan III, N. (1998). Data assimilation. In Brink, K. H. and Robinson, A. R., editors, *The Sea, Vol. 10, The global coastal ocean : Processes and Methods*, chapter 20, pages 541–594. John Wiley and Sons.
- Roblou, L. (2001). Modélisation de la variation de la surface libre en Mer Méditerranée - Validation de MOG2D. Rapport de maîtrise, Université Paul Sabatier, Toulouse III, LEGOS, Toulouse.
- Sadiki, W. (2005). *Estimation et validation a posteriori des statistiques d'erreur pour une assimilation à aire limitée*. PhD thesis, Université Paul Sabatier, Toulouse.
- SHYC (2003). Rapport d'activité, Séminaire d'HYdrodynamique Côtière - Centre IFREMER Brest 15-17 septembre 2003. Edité par Bernard Barnier et Pascal Lazure.
- Smagorinsky, J. (1963). General circulation experiments with the primitive equations : I. The basic experiment. *Mon. Wea. Rev.*, 91 :99–164.

RÉFÉRENCES

- Talagrand, O. (2-4 November 1998). A posteriori verification of analysis and assimilation algorithms. In *ECMWF Workshop on Diagnosis of Data Assimilation Systems*, pages 17–28. Reading.
- Toumazou, V. and Crétaux, J.-F. (2001). Using a Lanczos eigensolver in the computation of Empirical Orthogonal Functions. *Mon. Wea. Rev.*, 129 :1243–1250.
- Trigrid (1990). Trigrid software. Government of Canada, Department of fisheries and oceans.
- Verron, J. (1990). Altimeter data assimilation into an ocean circulation model : sensitivity to orbital parameters. *J. Geophys. Res.*, 95 :11443–11459.
- Verron, J., Cloutier, L., and Gaspar, P. (1996). Assessing dual-satellite altimetric missions for observing the midlatitude oceans. *J. Atmos. Oceanic Technol.*, 13 :1071–1089.
- Werner, E. and Lynch, D. R. (1987). Field verification of wave equation tidal dynamics in the English Channel and southern North Sea. *Adv. Water Resources*, 10 :115–130.
- Wright, D. G., Greenberg, D. A., Loder, J. W., and Smith, P. C. (1985). The Steady-State Barotropic Response of the Gulf of Maine and Adjacent Regions to Surface Wind Stress. *J. Phys. Oceanogr.*, 16 :947–966.
- Zavatarelli, M. and Pinardi, N. (2003). The Adriatic Sea Modelling System : a nested approach. *Annales Geophysicae*, 21 :345–364.

