

# Bibliography

- [1] M.B. Abbott, A. McCowan, and I.R. Warren. *Numerical modelling of free surface flows that are two-dimensional in plan*. Transport models for inland and coastal waters. Academic Press, London, 1981.
- [2] M.B. Abbott and A.W. Minns. *Computational Hydraulics. Second Edition*. Avebury, Aldershot UK and Bookfield, USA, 1997.
- [3] R.A. Anthes. Data assimilation and initialization of hurricane prediction models. *Journal of Atmospheric Sciences*, 31:702–719, 1974.
- [4] L Bode and T.A. Hardy. Progress and recent developments in storm surge modeling. *Journal of Hydraulic Engineering ASCE*, 123–No.4:315–331, 1997.
- [5] K. Bolding. Using a Kalman filter in operational storm surge prediction. In *Second International Symposium on Assimilation of Observations in Meteorology and Oceanography*, pages 379–383. World Meteorological Organization, March 1995.
- [6] H. Bucharad. 3D shallow water equations with a generalized vertical coordinate. Technical report, International Research Centre for Computational Hydrodynamics, ICCH, 1996.
- [7] G. Burgers, P.J. Van Leeuwen, and G. Evensen. On the analysis scheme in the ensemble Kalman filter. *Monthly Weather Review*, 1996. Submitted Dec 1996.
- [8] R. Cañizares. Data assimilation and parameter estimation in a 2-D advection-dispersion model. Master's thesis, International Institute for Infrastructural, Hydraulic and Environmental Engineering, Delft, The Netherlands, 1995. H.H. 222.
- [9] R. Cañizares, A.W. Heemink, and H.J. Vested. Sequential data assimilation in fully non-linear hydrodynamic model. In *Hydroinformatics '96*. Balkema, The Netherlands.
- [10] R. Cañizares, A.W. Heemink, and H.J. Vested. Application of advanced data assimilation methods for the initialisation of storm surge models. *Journal of Hydraulic Research*, 36–No.4:655–674, 1998.

- [11] C.K. Chui and Chen. *Kalman filter with real-time applications*, volume 17 of *Spring Series in Information Sciences*. Springer-Verlag, 1991.
- [12] S.E. Cohn and D.F. Parrish. The behavior of forecast error covariances for a Kalman filter in two dimensions. *Monthly Weather Review*, 119:1757-1785, 1991.
- [13] S.E. Cohn and R. Todling. Approximate data assimilation schemes for stable and unstable dynamics. *Journal of the Meteorological Society of Japan*, 74:63-75, 1996.
- [14] R. Daley. *Atmospheric data analysis*. Cambridge university press, Cambridge, U.K., 1991.
- [15] P. De Mey. Optimal interpolation in a model of the Azores Current in 1986-88. In P.Brasseur and C.J. Nihoul, editors, *Data assimilation: tools for modelling the ocean in a global change perspective*, volume 47 of *NATO ASI*. Springer-Verlag, Berlin, 1994.
- [16] P. De Mey. Data assimilation at the oceanic mesoscale: A review. *Journal of the Meteorological Society of Japan*, 71-1B:415-427, 1997.
- [17] D.P. Dee. Simplification of Kalman filter for meteorological data assimilation. *Q.J.R. Meteorological Society*, 117:365-384, 1991.
- [18] J.P. Delhomme. Kriging in hydrosciences. *Advanced in Water Resources*, 1:251-266, 1978.
- [19] DHI. Mike 21 user guide and reference manual. Danish Hydraulic Institute., 1995. Denmark.
- [20] M. Eknes and G. Evensen. Parameter estimation solving a weak constraint variational formulation for an ekman model. *Journal of Geophysical Research*, 102-C6:12479-12492, 1997.
- [21] G. Evensen. Using the extended Kalman filter with a multilayer quasi-geostrophic ocean model. *Journal of Geophysical Research*, 97-C11:17905-17924, 1992.
- [22] G. Evensen. Sequential data assimilation with a nonlinear quasi-geostrophic model using Monte Carlo methods to forecast the error statistics. *Journal of Geophysical Research*, 99-C5:10143-10162, 1994.
- [23] G. Evensen. Advanced sequential methods with nonlinear dynamics. In *Second International Symposium on Assimilation of Observations in Meteorology and Oceanography*, pages 147-158. World Meteorological Organization, March 1995.
- [24] G. Evensen. The ensemble Kalman filter. Paper prepared for the Advanced School on Ocean Forecasting, IMC-Centro Marino Internazionale, July 1997. Torregrande, Sardinia.

- [25] G. Evensen and P.J. Van Leeuwen. Assimilation of geosat altimeter data for the Agulhas current using the ensemble Kalman filter with a quasi-geostrophic model. *Monthly Weather Review*, 124:85–96, 1996.
- [26] I. Fukimori and P. Malanotte-Rizzoli. An approximate Kalman filter for ocean data assimilation: an example with an idealized Gulf Stream model. *Journal of Geophysical Research*, 100–C4:6777–6793, 1995.
- [27] A. Gelb. *Applied Optimal Estimation*. The M.I.T. Press, Cambridge, Massachusetts, and London, England, 1974.
- [28] M. Ghil and P. Malanotte-Rizzoli. Data assimilation in meteorology and oceanography. *Advanced in Geophysics*, 33:141–266, 1991.
- [29] K. Haines. A direct method of assimilating sea surface height data into ocean models with adjustments to the deep circulation. *Journal of Physical Oceanography*, 21:843–868, 1991.
- [30] K. Haines, P. Malanotte-Rizzoli, W.R. Holland, and R.E. Young. A comparison of two methods for the assimilation of altimeter data into a shallow water model. *Dynamics of the Atmosphere and the Ocean*, 17:89–133, 1993.
- [31] A.W. Heemink. *Storm surge prediction using Kalman filtering*. PhD thesis, Twente University of Technology, The Netherlands, 1986.
- [32] A.W. Heemink. Two dimensional shallow water flow identification. *Applied Mathematical Modelling*, 12:109–118, 1988.
- [33] A.W. Heemink. Identification of wind stress on shallow water surfaces by optimal smoothing. *Stochastic Hydrology and Hydraulics*, 4:105–119, 1990.
- [34] A.W. Heemink, K. Bolding, and M. Verlaan. Storm surge forecasting using Kalman filtering. *Journal of the Meteorological Society of Japan*, 75–No1B:195–208, 1997.
- [35] A. H. Jazwinski. *Stochastic Processes and Filtering Theory*. Academic Press, New York, 1970.
- [36] H.R. Jensen. Dynocs technical report, regional model. Technical report, European Community research project MAS2-CT94-0088, 1997.
- [37] R.E. Kalman. A new approach to linear filtering and prediction theory. *J. Basic. Engr.*, 82D:35–45, 1960.
- [38] R.E. Kalman and R.S. Bucy. New results in linear filtering and prediction theory. *J. Basic. Engr.*, 83D:95–108, 1961.
- [39] R.W. Lardner, A.H. Al-Rabeh, and N. Gunay. Optimal estimation of parameters for a two-dimensional hydrodynamical model of the Arabian Gulf. *Journal of Geophysical Research*, 98–C10:18229–18242, 1993.

- [40] J.J. Leendertse. *Aspects of a Computational Model for Water Wave Propagation*. M.I.T. Instrumentation Laboratory, Memo SGA 5-64, Cambridge, Massachusetts, 1964.
- [41] B.P. Leonard. The ULTIMATE conservative difference scheme applied to unsteady one-dimensional advection. *Comput. Methods Appl. Mech.*, 88:17–74, 1991.
- [42] P.F.J. Lermusiaux. *Error Subspace data assimilation methods for ocean field estimation: theory, validation and application*. PhD thesis, Harvard University, Cambridge, Massachusetts, USA, May 1997.
- [43] A.C. Lorenc. A global three-dimensional multivariate interpolation scheme. *Monthly Weather Review*, 109:701–721, 1981.
- [44] H. Madsen. Internal meetings of the International research Centre for Computational Hydrodynamics, Nov 1997. Denmark.
- [45] H. Madsen. On the use of Monte Carlo simulation methods for data assimilation in Mike 21. Technical report, International Research Centre for Computational Hydrodynamics, 1997.
- [46] G. de Marsily. *Quantitative Hydrogeology. Groundwater hydrology for engineers*. Academic Press, New York, 1986.
- [47] P.S. Maybeck. *Stochastic Models, Estimation and Control*, volume 141–1 of *Mathematics in Science and Engineering*. Academic Press, New York, 1979.
- [48] J.C. McWilliams. Modeling the oceanic general circulation. *Annu.Rev. Fluid Mechanics*, 28:215–248, 1996.
- [49] J.D. Pietrzak and K. Bolding. *Towards a Coastal Ocean Prediction system of the Danish domestic waters*. Coastal Ocean Prediction. 1998.
- [50] J.D. Pietrzak. The use of TVD limiters for forward-in-time upstream-biased advection schemes in ocean modeling. *Monthly Weather Review*, 126:812–830, 1998.
- [51] J.D. Pietrzak, J.B. Jacobsen, H.J. Vested, H. Buchard, and O. Petersen. A three-dimensional hydrostatic model for coastal and shelf sea modelling. Technical report, International Research Centre for Computational Hydrodynamics, ICCH, 1998.
- [52] N. Pinardi. Ocean numerical modelling: A historical point of view. Paper prepared for the Advanced School on Ocean Forecasting, IMC-Centro Marino Internazionale, July 1997. Torregrande, Sardinia.
- [53] J.E. Potter. *W Matrix Augmentation*. Rand Memorandum, RH-5299-PR, Santa Monica, California, 1967.

- [54] R.W. Preisendorfer. *Principal components analysis in meteorology and Oceanography*. Elsevier, Amsterdam, 1988.
- [55] M.M. Rienecker and R.N. Miller. Ocean data assimilation using optimal interpolation with a quasigeostrophic model. *Journal of Geophysical Research*, 96:15093–15103, 1991.
- [56] A. Sokolov, O. Andrejev, F. Wulff, and M. Rodriguez Medina. The data assimilation system for data analysis in the Baltic Sea. In *Systems Ecology contributions*, volume 3. Stockholm University, Stockholm, 1997.
- [57] O. Talagrand and P. Courtier. Variational assimilation of meteorological observations with the adjoint vorticity equations. part i, theory. *Q.J.R. Meteorological Society*, 1988.
- [58] W. Thacker and R.B. Long. Fitting dynamics to data. *Journal of Geophysical Research*, 93-C2:1227–1240, 1988.
- [59] R. Todling and S.E. Cohn. Suboptimal schemes for atmospheric data assimilation based on the Kalman filter. *Monthly Weather Review*, 122:2530–2557, 1994.
- [60] M. Verlaan. Some extensions to the calibration program WAQAD. Technical Report 94-111, Faculty of Technical Mathematics and Informatics, Delft University of Technology, 1994. [w.lib.mrt.ac.uk](http://w.lib.mrt.ac.uk)
- [61] M. Verlaan. Convergence of the RRSQRT algorithm for large scale Kalman filter problems. Technical Report 97-19, Faculty of Technical Mathematics and Informatics, Delft University of Technology, 1997.
- [62] M. Verlaan. *Efficient Kalman filtering algorithms for hydrodynamic models*. PhD thesis, Technical University of Delft, The Netherlands, 1998.
- [63] M. Verlaan and A.W. Heemink. Reduced rank square root filters for large scale data assimilation problems. In *Second International Symposium on Assimilation of Observations in Meteorology and Oceanography*, pages 247–252. World Meteorological Organization, March 1995.
- [64] M. Verlaan and A.W. Heemink. Tidal flow forecasting using reduced rank square root filters. *Stochastic Hydrology and Hydraulics*, 11:349–368, 1997.
- [65] H.J. Vested, W.J. Nielsen, H.R. Jensen, and K. Bolding. *Skill assessment of an operational hydrodynamic forecast system for the North Sea and Danish Belts*, volume 47 of *Coastal and Estuarine Studies*. American Geophysical Union, Washington, DC, 1995.
- [66] J.W. De Vries. Verification of the WAQUA/CSM-16 model for the winters 1992/1993 and 1993/1994. Technical Report TR 176, KNMI, 1995.



- [67] E.F. Wood and P.E. O'Connell. Real-time forecasting. In *Hydrological Forecasting*. Wiley, New York.
- [68] X.F. Zhang. *Data assimilation in air pollution modelling*. PhD thesis, Delft University of Technology, Delft, The Netherlands, 1997.
- [69] Y. Zhou. Kalmod a stochastic-deterministic model for simulating groundwater flow with Kalman filtering. Technical Report IHE-22, International Institute for Infrastructure, Hydraulic and environmental Engineering, Delft, The Netherlands, 1991.

