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**R Archibald, F Bao\*** (bao@math.fsu.edu) and **X Tu**. *A Direct Filter Method for Parameter Estimation.*

Parameter estimation is an important research topic in data assimilation. In this paper, a novel parameter estimation method is introduced, where the parameter is considered as the state process in a nonlinear filtering problem and the state model that contains the parameter is used to construct a pseudo-observation. This approach is named the direct filter method since nonlinear filter algorithms are used to estimate the parameter directly without estimating the state model as part of the solution in the nonlinear filtering problem. Numerical experiments are carried out to examine the effectiveness and accuracy of the direct filter method. (Received January 09, 2019)