

Development of a "multilingual" data assimilation library

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Data assimilation is now applied in various fields not limited to geophysical researches. There are several documents and textbooks for data assimilation methods, and some free data assimilation codes are also available. These materials have been helping researchers of various research areas who want to use data assimilation techniques. However, it is sometimes time-consuming to implement a data assimilation method for a practical simulation code after reading the documents and the public assimilation codes. In particular, if one can not find any data assimilation codes written in his/her familiar language, it would take trouble to development a data assimilation code. We aim to provide a data assimilation program library in a variety of programming language which is easy for various researches to try to apply. As a pilot work, we developed a library of the particle filter based on Python which was reported last year, and it have been provided for several researchers. Now we are developing a similar framework in different languages such as R and Matlab which help researchers to develop a data assimilation system with the ensemble Kalman filter or the particle filter. We will introduce our data assimilation library and discuss future prospects.

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