

Svetlana Dubinkina (VU)

Data assimilation with randomized observations

Ensemble Kalman filtering is widely used in many applications, and it can be analyzed via the continuous ensemble Kalman-Bucy framework. The corresponding ensemble Kalman-Bucy filter exhibits long-time stability and accuracy with fully observed state, as has been shown in Wiljes and Tong (2020). In this work, under some condition we show similar results but with partially observed state. Furthermore, we claim that this condition needs to be satisfied with high probability in order to provide filter stability, consequently leading to randomized observations.

In collaboration with Nazanin Abedini (VU Amsterdam) and Jana de Wiljes (U. Of Ilmenau)