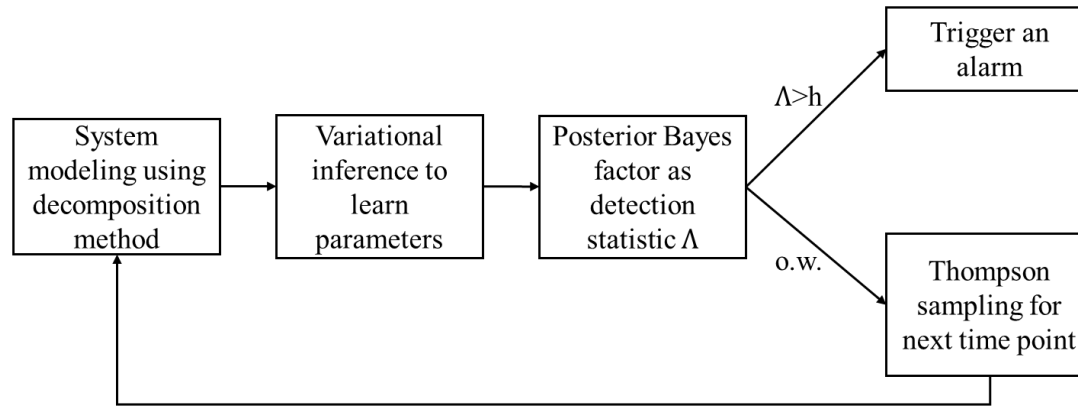# High-dimensional data monitoring via adaptive sampling

Background: with the rapid development of sensor technology, high-dimensional streaming data has been available for system anomaly detection. However, there are some constraints for sampling high-dimensional variable at each time point, such as purchase and allocation cost, sensor's battery, transmission bandwidth and the computer's memory. To handle them, we need to develop a new change detection scheme to achieve adaptively sampling and quickly system change detection.

Data structure: high-dimensional data with sparse change. For example, the hard recognizable flaws in image or video data.

Method:

Applied scene: solar flare detection

| Original data | Sampling points | Estimated anomaly |