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(57) Abstract :  
 ABSTRACT: Title: A New Lookahead Sampling Particle Filter and Method Thereof The present disclosure proposes a system (100) for filtering fast particle by weighting look-ahead and method thereof. The system (100) comprises a computing device (102) having a processor (104) and a memory (106) for storing and executing a plurality of instructions and a plurality of modules (108). The plurality of modules (108) comprises an input module (110), an establishment module (112), a determination module (114), a classification module (116), and a filter module (118). The proposed system (100) that eliminates the observational noise model predicated upon weight of the particles. The proposed system (100) that tracks the system's state as it changes over time. The proposed system (100) that generates particles in high importance regions of the state process. The proposed system (100) that utilises a model complex systems with nonlinear dynamics and non-Gaussian noise.

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