

Peer Review

Review of: "Active Sequential Posterior Estimation for Sample-Efficient Simulation-Based Inference"

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1. Some derivations in the acquisition function section (e.g., Eq. 2–4) are **mathematically dense** and might benefit from **more intuitive explanation**.
2. While the method scales to high-dimensional problems, it would be useful to analyze performance on even larger parameter spaces or under limited computational resources.
3. Does the performance depend heavily on the number of proposal samples per round? Some insight into hyperparameter sensitivity would be helpful.
4. Would visualizing posterior uncertainty reduction over simulation rounds be helpful in showcasing ASNPE's strengths?
5. While ASNPE performs well overall, it lags slightly in early rounds due to batch updates. More **analysis of trade-offs between batch and online updating** would be valuable.
6. Overall writing style should be improved significantly.

Declarations

Potential competing interests: No potential competing interests to declare.