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Event-Based Control of Depth of Hypnosis in Anesthesia

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Highlights

- The use of an event-based control strategy is applied to the closed-loop control of the depth of hypnosis in anesthesia by using propofol administration and the bispectral index as a controlled variable.
- A new event generator with high noise-filtering properties is employed in addition to a PIDPlus controller.
- The effectiveness and robustness of the method is verified in simulation by considering a set of patients representative of a large population to address the inter-patient variability and by implementing a Monte Carlo method to address the intra-patient variability.

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