

عنوان مقاله:

Blood Glucose Regulation for Patients with Type-1 Diabetes Using Model Predictive Control

محل انتشار:

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خلاصه مقاله:

In this article, linear and nonlinear model predictive controllers (MPC) have been used to regulate blood glucose of patients with type 1 diabetes. These controllers can reject any type of glycemic disturbance in an acceptable manner. Least squares method with covariance resetting has been used to identify linear and nonlinear models for the system. These models are used to predict the system output in the future and based on them linear and nonlinear MPC have been designed to regulate the blood glucose. Performance of these controllers tested and compared through computer simulation.

کلمات کلیدی:

blood glucose, type 1 diabet, model predictive control

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