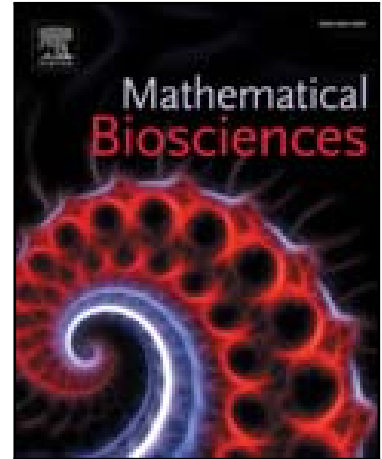


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Adaptive Fuzzy Integral Sliding Mode Control of Blood Glucose Level
in Patients with Type 1 Diabetes: in silico Studies

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HIGHLIGHTS

- A complete dynamic model of closed-loop system of blood glucose regulation is presented.
- Effects of carbohydrates consumption and physical exercise of type 1 diabetes mellitus patients on the blood glucose level are studied, simultaneously.
- An automatic control algorithm is introduced for artificial pancreas.
- A novel adaptive fuzzy integral sliding mode control is proposed for nonlinear time variant single input - single output systems.

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