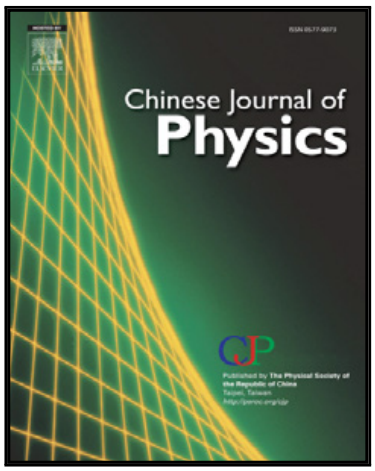
Accepted Manuscript



Control of an Artificial Human Pancreas

Muhammad Umer Saleem , Muhammad Farman , M.O. Ahmad , Muhammad Rizwan

PII: S0577-9073(17)30202-2
DOI: 10.1016/j.cjph.2017.08.030
Reference: CJPH 342

To appear in: *Chinese Journal of Physics*

Received date: 4 March 2017
Revised date: 25 August 2017
Accepted date: 25 August 2017

Please cite this article as: Muhammad Umer Saleem , Muhammad Farman , M.O. Ahmad , Muhammad Rizwan , Control of an Artificial Human Pancreas, *Chinese Journal of Physics* (2017), doi: 10.1016/j.cjph.2017.08.030

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Highlights:

- Sturis-Tolic model is controllable and observable.
- Modification of Sturis-Tolic Model for Type 1 Diabetes Mellitus are made.
- Lyapunov equation is used to check the stability analysis of the model which yields that the modified model is stable.
- The numerical simulation of model for Type 1 Diabetes Mellitus for controllability and observability matrix according to different initials condition on state vector.
- These models can be used to simulate glucose insulin system for treatment of Type I diabetes.

ACCEPTED MANUSCRIPT

Download English Version:

https://daneshyari.com/en/article/5488132

Download Persian Version:

https://daneshyari.com/article/5488132

Daneshyari.com