Regulate the Efficiency of Cardiac Pacemaker based on Predictive Controller and Neural Predictive Controller

Abstract

Heart disease is one of more serious diseases which are considered as the first reason that causes deaths in the world. Therefore, the need arises to find new ways to maintain the safety of patients. The pacemaker is the important device that helps for regulating the heart rate and ensures its survival in the normal range of human heart. This paper proposed methods to control the pacemaker based on the model predictive control and neural predictive control. The results show the model predictive control with neural network gives the better performance with zero overshoot.

References

Controller for Cardiac Pacemaker“, International Journal of Science and Research (IJSR), ISSN (Online): 2319-7064, Volume 3 Issue 10, October 2014.


Index Terms

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Keywords

Model predictive control, neural predictive control, pacemaker, heart rate.