

Implementing a Software-based Controller as a Strategy for Teaching Digital Control

Abstract

Automatic Control is an enabling technology in the core of almost each aspect of our lives. In consequence, enhancing the learning process of key aspects of automatic controllers is always a timely subject. In this paper, we explore the use of software based controllers with low cost hardware in order to obtain better learning results. In particular, we use LabVIEW software, Arduino-based data acquisition system, and simple circuits as tools for understanding basic concepts of digital control. This strategy is used in automatic-control undergraduate and postgraduate courses.