Transactions on Machine Design Volume 1 Number 2 August 2013

| Contents | |
|---|----|
| Editorial | i |
| Research | |
| A T-S Model-Based Sliding Mode Control for Nonlinear System- Lotfi Chaouech, Abdelkader Chaari | 49 |
| Multi-Agent Modeling of a Complex System- Noureddine Seddari, Mohammed Redjimi | 61 |
| FPGA Based Crosstalk-Resistant Adaptive Decorrelator- T. J.Moir | 76 |
| An RFID-Enabled Distributed Control and Monitoring System for a Manufacturing System- Ali Vatankhah Barenji, Reza Vatankhah Barenji, Bahram Lavi Sefidgari | 86 |
| Book Review | 96 |
| Conference Notification | 97 |

- The Second International Conference on Future Generation Communication Technologies (FGCT 2013)
- The First International Conference on New Visions for Information and Communication Technology (ICNVICT 2013)
- The Fifth International Conference on the Applications of Digital Information and Web Technologies (ICADIWT)

Editorial

Fuzzy models have profound influence in non-linear systems. The authors in the first paper have proposed the sliding mode control algorithm based on Takagi-Sugeno fuzzy model. The theortical approaches proposed are validated using a flexible joint manipulator.

In the next paper the authors have proposed a multi-agent model for modeling an industrial system (steam generator. The authors claim that this system will enable the practical training of future operators to control industrial installation.

The next paper has addressed the implementation of an adaptive decorrelator based on two cross coupled least-mean squares (LMS) algorithms. This system has potential applications in such areas as requires blind-source separation of random signals, the author noted.

Efficient manufacturing systems need to be supported by intelligent control architectures. Many current distributed control systems, are now characterised from lack of flexibility and agility. To limit the shortcomings RFID-enabled distributed control and monitoring system has been explored using a flexible manufacturing system (EMU- CIM lab) and also to demonstrate the feasibility of the proposed architecture successfully.

The papers published in this issue are innovative in design as well as on the applications.

Editors