

# International Journal of System Dynamics Applications

October-December 2015, Vol. 4, No. 4

## Table of Contents

### RESEARCH ARTICLES

- 1    **Towards Harnessing Phone Messages and Telephone Conversations for Prediction of Food Crisis**  
*Andrew Lukyamuzi, Institute of Computer Science, Mbarara University of Science and Technology, Mbarara, Uganda*  
*John Ngubiri, College of Computing and Information Sciences, Makerere University,*  
*Washington Okori, Uganda Technology and Management University (UTAMU), Kampala, Uganda*
- 17    **The Dynamics of Food Insecurity in Ethiopia**  
*Melak Mesfin Ayenew, Millennium Institute, Addis Ababa, Ethiopia & Addis Ababa Science and Technology*  
*University, Addis Ababa, Ethiopia*
- 35    **Extracting Biological Significant Subnetworks from Protein-Protein Interactions Induced by Differentially Expressed Genes of HIV-1 Vpr Variants**  
*Bandana Barman, Department of Electronics and Communication Engineering, Kalyani Government Engineering*  
*College, Kalyani, India*  
*Anirban Mukhopadhyay, Department of Computer Science and Engineering, University of Kalyani, Kalyani, India*
- 52    **Stabilizing and Swinging-Up the Inverted Pendulum Using PI and PID Controllers Based on Reduced Linear Quadratic Regulator Tuned by PSO**  
*M. E. Mousa., Ministry of Civil Aviation, Cairo, Egypt*  
*M. A. Ebrahim, Electrical Engineering Department, Benha University, Cairo, Egypt*  
*M. A. Moustafa Hassan, Electrical Power Department, Cairo University, Giza, Egypt*

### Copyright

The **International Journal of System Dynamics Applications (IJSDA)** (ISSN 2160-9772; eISSN 2160-9799), Copyright © 2015 IGI Global. All rights, including translation into other languages reserved by the publisher. No part of this journal may be reproduced or used in any form or by any means without written permission from the publisher, except for noncommercial, educational use including classroom teaching purposes. Product or company names used in this journal are for identification purposes only. Inclusion of the names of the products or companies does not indicate a claim of ownership by IGI Global of the trademark or registered trademark. The views expressed in this journal are those of the authors but not necessarily of IGI Global.

The *International Journal of System Dynamics Applications* is indexed or listed in the following: ACM Digital Library; Bacon's Media Directory; Cabell's Directories; Google Scholar; INSPEC; JournalTOCs; MediaFinder; ProQuest Advanced Technologies & Aerospace Journals; ProQuest Computer Science Journals; ProQuest Illustrata: Technology; ProQuest SciTech Journals; ProQuest Technology Journals; The Standard Periodical Directory; Ulrich's Periodicals Directory