Table of Contents

International Journal of Agricultural and Environmental Information Systems

Volume 12 • Issue 1 • January-March-2021 • ISSN: 1947-3192 • eISSN: 1947-3206

Guest Editorial Preface

iv Special Issue on Innovations in Information and Communications Technologies for Sustainable Environment

Open Access Article

1 Agricultural Recommendation System for Crops Using Different Machine Learning Regression Methods

Mamata Garanayak, School of Computer Engineering, KIIT University (Deemed), Bhubaneswar, India Goutam Sahu, Department of Computer Science and Engineering, Centurion University of Technology and Management, Bhubaneswar, India

Sachi Nandan Mohanty, Department of Computer Engineering, College of Engineering Pune, Pune, India Alok Kumar Jagadev, School of Computer Engineering, KIIT University (Deemed), Bhubaneswar, India

21 IoT-Based Intelligent Irrigation System for Paddy Crop Using an Internet-Controlled Water Pump

Brij Bhushan Sharma, Shoolini University of Biotechnology and Management Sciences, Solan, India Nagesh Kumar, Shoolini University of Biotechnology and Management Sciences, Solan, India

37 Trust-Based Opportunistic Network Offloaders for Smart Agriculture

Prince Sharma, Jaypee University of Information Technology, Waknaghat, India Shailendra Shukla, Motilal Nehru National Institute of Technology Allahabad, India Amol Vasudeva, Jaypee University of Information Technology, Waknaghat, India

55 Smart Farming: An Approach for Disease Detection Implementing IoT and Image Processing

Hui Pang, Hebei University of Architecture, China Zheng, Tangshan Normal University, China Tongmiao Zhen, College of Information Engineering, Hebei University of Architecture, China Ashutosh Sharma, Institute of Computer Technology and Information Security, Southern Federal University, Russia

68 Smart Agriculture and Food Storage System for Asia Continent: A Step Towards Food Security

Guo Si-Wen, Weifang University of Science and Technology, China Mohammad Asif Ikabl, Lovely Professional University, India Pradeep Kumar, University of KwaZulu-Natal, South Africa

80 A Cyber Sensor Model for Cyber-Physical-Social Systems

Olga Murdoch, University College Dublin, Ireland Michael J. O'Grady, University College Dublin, Ireland Gregory O'Hare, University College Dublin, Ireland

COPYRIGHT

The International Journal of Agricultural and Environmental Information Systems (IJAEIS) (ISSN 1947-3192; eISSN 1947-3206), From the journal's inception, January 1, 2010, to December 31, 2020, all rights, including translation into other languages is reserved by the publisher, unless otherwise stated in the article manuscript. As of January 1, 2021, this journal operates under the gold Open Access model, whereby all content published after this date is distributed under the terms of the Creative Commons Attribution 4.0 International (CC BY 4.0) License (http://creativecommons.org/licenses/by/4.0/) where copyright for the work remains solely with the author(s) of the article manuscript. 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 Agricultural and Environmental Information Systems is indexed or listed in the following: Bacon's Media Directory; Cabell's Directories; Compendex (Elsevier Engineering Index); DBLP; Google Scholar; INSPEC; JournalTOCs; Library & Information Science Abstracts (LISA); MediaFinder; SCOPUS; The Standard Periodical Directory; UGC-CARE List (India); Ulrich's Periodicals Directory; Web of Science; Web of Science Emerging Sources Citation Index (ESCI)