

TABLE OF CONTENTS

1. An IoT System to Measure and Detect Foreign Object Debris (FOD) on Airport Runways Using AI and Computer Vision <i>Hiep Nguyen-Hoang, Quyen Nguyen-Van, Vinh Tran-Quang*</i> Hanoi University of Science and Technology, Ha Noi, Vietnam * Corresponding author email: vinh.tranquang1@hust.edu.vn	1
2. UAV-to-Satellite Communication for 6G IoV Networks Using Beamforming Orthogonal Time Frequency Space: A Deep Q-Learning Approach <i>Nguyen Huu Trung*</i> School of Electrical and Electronic Engineering, Hanoi University of Science and Technology, Ha Noi, Vietnam * Corresponding author email: trung.nguyenhuu@hust.edu.vn	9
3. Static Hand Gesture Recognition Using a Low-Cost Data Glove and Bayesian Neural Network <i>Son T. Nguyen*, Tu M. Pham, Anh Hoang, Trung T. Cao, Quang M. Tran</i> Hanoi University of Science and Technology, Ha Noi, Vietnam * Corresponding author email: son.nguyenthanh@hust.edu.vn	18
4. Enhancing Hydro Turbine Frequency Regulation with Neural Network-Aided PID Governor Design <i>Nguyen Hong Quang*, Nguyen Tuan Ninh</i> School of Electrical and Electronic Engineering, Hanoi University of Science and Technology, Ha Noi, Vietnam * Corresponding author email: quang.nguyenhong1@hust.edu.vn	25
5. A Simple Space Vector Modulation to Eliminate Zero Sequence Voltage with Balanced Neutral Point Voltage for a New Five-Level Voltage Source Inverter <i>Huu-Cong Vu¹, Dau Quang Tuan², Dao Do Duy Tung², Vu Hoang Phuong^{2,*}</i> ¹ Hanoi University of Civil Engineering, Ha Noi, Vietnam ² Hanoi University of Science and Technology, Ha Noi, Vietnam * Corresponding author email: phuong.vuhoang@hust.edu.vn	33

6. Assessment and Estimation on Operation Range of Experimental Unmanned Helicopter

*Hoang Thi Kim Dung**

Hanoi University of Science and Technology, Ha Noi, Vietnam

* Corresponding author email: dung.hoangthikim@huts.edu.vn

..... 41

7. Swing-Up and Position Control of Inverted Pendulum–Cart Systems Using Optimized Fuzzy Controller

*Hai-Le Bui, Thi-Thoa Mac**

School of Mechanical Engineering, Hanoi University of Science and Technology, Ha Noi, Vietnam

* Corresponding author email: thoa.macthi@hust.edu.vn

..... 49

8. Design and Optimization of High-Efficiency Ceiling Fan Blades

Bao Duy Thanh Tran¹, Duc Huy Ta², Dinh Quan Tran², Dinh Quy Vu¹, Thi Tuyet Nhung Le^{1,}*

¹ Hanoi University of Science and Technology, Ha Noi, Vietnam

² Gcool Joint Stock Company, Ha Noi, Vietnam

* Corresponding author email: nhung.lethituyet@hust.edu.vn

..... 60

9. An Autoencoder Approach to Water Level Forecasting

Thanh Loi Dang¹, Kim-Ngan T. Nguyen^{2,}, Dinh Nhat Quang³, Doanh Nguyen-Ngoc⁴*

¹ Faculty of Computer Science and Engineering, Thuyloi University, Ha Noi, Vietnam

² Faculty of Data Science and Artificial Intelligence, National Economics University, Ha Noi, Vietnam

³ Faculty of Civil Engineering, Thuyloi University, Ha Noi, Vietnam

⁴ College of Engineering and Computer Science and Center for Environmental Intelligence, VinUniversity, Ha Noi, Vietnam

* Corresponding author email: ngannguyen@neu.edu.vn

..... 71

10. Determination of the Energized State Operating Point of an AC Contactor Coil Using a Bayesian Neural Network

Son T. Nguyen, Tu M. Pham, Anh Hoang, Tu A. Nguyen*

Hanoi University of Science and Technology, Ha Noi, Vietnam

* Corresponding author email: son.nguyenthanh@hust.edu.vn

..... 80