Session Poster 3 (8/8 Thu. 11:30 – 12:30)

Room: 7F 交誼廳

1. (S0015) Energy-Efficient Fast Convolution Algorithm for Deep Convolutional Neural Networks based on FPGA

   Wen-Jie Li and Shanq-Jang Ruan

   National Taiwan University of Science and Technology

2. (S0025) Optimized Piecewise-Linear Lookup Table without Multipliers for Activation Functions in Neural Network

   Wen-Chang Yang and Tsung-Chu Huang

   National Changhua University of Education

3. (S0026) Accelerating Neural Network with Totally Self-Checking through Sigmoidal Activation Functions

   Chun-Hao Chiang, Liang-Yu Lin, Mo-Han Lin, and Tsung-Chu Huang

National Changhua University of Education

4. (S0043) A Stochastic Spiking Neural Network with on-chip Learning Capability

   Vikas, Wu-Xin Lai, Jie An Yu, Ting Heng, and Hsin Chen

   National Tsing Hua University

5. (S0047) Rapid Rate-Control Scheme for High Efficiency Video Coding

   Jun-An Cai and Jui-Hung Hsieh

   National Kaohsiung University of Science and Technology

6. (S0056) Convolution Accelerator for Low-Precision Neural Network

   Chia-Ning Liu and Chih-Hung Kuo

   National Cheng Kung University

7. (S0058) A Co-Design Technique to Enhance PE Utilization for Sparse Convolutional Neural Networks

   Wei-Fan Tseng, Bo-Cheng Lai, and Jyun-Wei Pan

   National Chiao Tung University

8. (S0061) Implementation of Personalized ACC System with Deep Neural Network on FPGA

   Trong-Yen Lee, Chun-Chieh Hsieh, I-An Lin, and Min-Jia Liu

   National Taipei University of Technology

9. (S0064) A Low Power Deep Learning Method for Object Identification

   Yi-Hsuan Hsu and Jiun-In Guo

   National Chiao Tung University

10. (S0074) Design and Implementation of CAN/FlexRay/Ethernet Gateway for Vehicle Network

    Ju-Tse Tsai, Trong-Yen Lee, Chia-Wei Kuo, and Min-Jia Liu

    National Taipei University of Technology

11. (S0076) A Robust Faster RCNN Network for PCB Defect Inspection

    Yu-Ting Li and Jiun-In Guo

    National Chiao Tung University

12. (S0081) Non-Volatile Ferroelectric FET Memory for In-Memory Computing Applications

Tun-Yi Ho and Vita Pi-Ho Hu

National Central University

13. (S0084) Health detection for Potato Leaf with Convolutional Neural Network

Trong-Yen Lee, Jui-Yuan-Yu, and Min-Jia Liu

National Taipei University of Technology

14. (S0090) Design of a DBN Hardware Accelerator for Handwritten Digit Recognitions

Ching-Che Chung, Yi-Zeng Lee, and Huai-Xiang Zhang

National Chung Cheng University

15. (S0100) Scaling Bit-Progressive Neural Networks

Yu-Tang Lin and Yun-Nan Chang

National Sun Yat-sen University

16. (S0104) Unsupervised GAN-based Learning Accelerator Design

Ming-Han Shieh and Jer-Min Jou

National Cheng Kung University

17. (S0106) Classification of Alzheimers Disease, Mild Cognitive Impairment, and Normal Aging based on

    Neuropsychological Data via Supervised Learning

    Gwo Giun (Chris) Lee, Po-Wei Huang, and Yi-Ru Xie

    National Cheng Kung University

18. (S0121) Flyback Converter with Constant Current Control for Fast Charger Applications

    Ting Chieh Lin, You Ching Wu, and Chin Hsia

    National Central University

19. (S0138) AdaBoost-assisted Extreme Learning Machine for Efficient Online Sequential Classification

    Yi-Ta Chen, Yu-Chuan Chuang, and An-Yeu (Andy) Wu

    National Taiwan University

20. (S0148) Design and Implementation of SAE J1939 Heavy-Duty (HD) Vehicle Diagnosis System

    Sheng-Jhu Luo, B. V. P. Prasad, and Jing-Jou Tang

Southern Taiwan University of Science and Technology

21. (S0153) Blind Spot Detection and Door Open Alarm System

Ching-Lung Su and Gu-Ming Zhang

National Yunlin University of Science and Technology

22. (S0157) Event-driven memory circuit for spike-time dependent learning

Jie-An You and Hsin Chen

National Tsing-Hua University

23. (S0165) Massively parallel Distributed Computing Platform for Genomic Range-Join operation

Aman Sinha and Bo-Cheng Lai

National Chiao Tung University

24. (S0179) A Thin-film Supercapacitor for Smart Contact Lens Applications

Jin-Chern Chiou, Cheng-En Shieh, Kuan-Ting Yeh, Cheng-Yu Hsu, and Shun-Hsi Hsu

National Chiao Tung University

25. (S0180) A Smart Single-Sensor Device for Instantaneously Monitoring Lower Limb Exercises

Yan-Ping Chang (1), Teng-Chia Wang (1), Chun-Jui Chen (1), Chia-Chun Lin (1), Yung-Chih Chen (2), and

Chun-Yao Wang (1)

(1) National Tsing Hua University and (2) Yuan Ze University

26. (S0183) A Digital Twin for Fire Response System Simulation

Kuan-Ting Yeh and Pei-Hsuan Tsai

National Cheng Kung University

27. (S0196) A Cost-Effective Bit-Level Sorting-Free Two-Dimensional Median Filter Design

Tong-Yu Hsieh, Yu-Chun Chen, and Kuei-Szu Huang

National Sun Yat-sen University

28. (S0198) Thermal Mapping of Systolic Array Based Accelerator for Three-Dimensional Multiple

Convolution Neural Network Application

Shu-Yen Lin, Chun-Kuan Tsai, and Yu-Hsuan Lee

Yuan Ze University

29. (S0203) On-Display Fingerprint Orientation Field Enhancement by Adaptive Block Size and Neighboring

Correction for IoBT

Huei-Ming Wu and Pei-Yung Hsiao

National University of Kaohsiung

30. (S0205) Design of Leather Defects AOI System for Shoe Industry

Kuei-Chung Chang, Jun-Xian Lee, Xin-Yu Chen, and Hong-Yi Chiu

Feng Chia University