



28th International Workshop on Post-Binary ULSI Systems (ULSIWS2019)

Tentative Program

11:30-13:30	Registration & Lunch (12:00-:13:30)
13:30-13:35	Opening Remark <i>General Chair, Masanori Natsui (Tohoku University, Japan)</i>
Regular Session: Chair <i>Shinobu Nagayama (Hiroshima City University)</i>	
13:35-14:00	Making Efficient Quantized Neural Network Engine by Hardware/Algorithm Co-Design An FPGA Implementation of Integer Arithmetic and Sparse Architecture for Semantic Segmentation <i>Youki Sada, Masayuki Shimoda, and Hiroki Nakahara (Tokyo Institute of Technology, Japan)</i>
14:00-14:25	A New Quantum Petri Net Based on QRAM-Based Architecture <i>Tomoyuki Araki (Hiroshima Institute of Technology, Japan)</i>
14:25-14:50	Applied Tri-State Weight Convolutional Neural Network to Embedded Computer Vision Systems <i>Hiroki Nakahara (Tokyo Institute of Technology, Japan)</i>
14:50-15:10	Coffee Break
Regular Session: Chair <i>Hiroki Nakahara (Tokyo Institute of Technology, Japan)</i>	
15:10-15:35	Training of neural networks for edge computing system using large unlabeled dataset <i>Takumi Yamaguchi, Masato Suzuki, Yosuke Iijima, (National Institute of Technology (KOSEN), Oyama College, Japan), Hirokazu Nosato, Hidenori Sakanashi, Masahiro Murakawa (National Institute of Advanced Industrial Science and Technology (AIST), Japan)</i>
15:35-16:00	Hardware Accelerator for Convolutional Neural Networks Based on Intra-Kernel Regular Pruning <i>Maurice Yang and Vincent Gaudet (University of Waterloo, Canada)</i>
16:00-16:25	Machine Learning and Medical Imaging: What Can the ULSI Community Contribute? <i>Vincent Gaudet (University of Waterloo, Canada), Katherine Zukotynski (McMaster University, Canada)</i>
16:25-16:50	Design of an MTJ-Based Fully-Nonvolatile Microcontroller LSI and Its Impact on IoT Applications <i>Masanori Natsui and Takahiro Hanyu (Tohoku University, Japan)</i>
16:50-16:55	Closing <i>General Chair, Masanori Natsui (Tohoku University, Japan)</i>
18:00-	ISMVL2019 Reception

20 (Talk)+5(Q&A) minutes for each presentation

Proceedings can be downloaded from:
<http://www.ngc.riec.tohoku.ac.jp/ULSIWS2019/proceedings.pdf>