

## Poster Session

**[P1] Chikyu-kun: The Future System for Creating Sustainable Society**

Junya Terayama<sup>1</sup>, Dawool Choi<sup>2</sup>, Haruka Momma (<sup>1</sup>Graduate School of Engineering, Tohoku University, <sup>2</sup>Graduate School Faculty of Arts and Letters, Tohoku University)

**[P2] Power Reduction Method of Non-volatile Devices with Error-resilient Deep Neural Networks**

Tao Li, Zhang Li, Yitao Ma, and Tetsuo Endoh (Graduate School of Engineering, and Center for Innovative Integrated Electronic Systems (CIES))

**[P3] High-calculation efficiency, Low hardware complexity Error Correction Method for Spin-Transfer Torque Magnetic Random-Access Memory**

Zhang Li, Tao Li, Yi Tao Ma, Tetsuo Endoh (Graduate School of Engineering, and Center for Innovative Integrated Electronic Systems (CIES))

**[P4] Automated hybrid separation sequences synthesis framework for process industry**

Anqing Wang (Department of chemical engineering, Tohoku University)

**[P5] A Society Where Anyone Can Buy and Sell Renewable Energy -A Sustainable Electricity Utilization System Using Blockchain**

Sunao Watabe, Shunnosuke Ohmori, Tomoki Yamaya, Kanon Sasaki (Tohoku University)

**[P6] Technology choice for manufacturing phenolic products based on renewable resource capacity**

Yuuki Watanabe, Yasuhiro Fukushima, Hajime Ohno (Department of Chemical Engineering, Tohoku University)

**[P7] Can introduction of PVC de-chlorination technology bring circularity benefits? - An analysis using a multi-objective, multi-regional technology choice model**

Ryodai Makino, Yasuhiro Fukushima, Hajime Ohno (Department of Chemical Engineering, Tohoku University)

**[P8] Nitrogen flow analysis in Japan for the realization of low carbon society**

Takuro Inoue, Aurup Ratan Dhar, Zhengyang Zhang, Kazuyo Matsubae (Tohoku University)

**[P9] Trial for designing chemical process using quantum annealing machine**

**Case study: Separation process configuration optimization**

Kazuki Fukushima, Yasuhiro Fukushima, Hajime Ohno (Department of Chemical Engineering, Tohoku University)

**[P10] A cradle-to-gate greenhouse gases emission perspective for assessment of CCU technologies - Comparison of process options in non-reductive CO<sub>2</sub> utilization for poly-carbonate diol production**

Seokjin Hong (Department of Chemical Engineering, Tohoku University)

**[P11] Carbon-circularity-based evaluation of recycling process with dynamic MFA approach**

Yosuke Nagase, Yasuhiro Fukushima, Hajime Ohno (Department of Chemical Engineering, Tohoku University)

**[P12] Land Use Change Induced by Copper Mining: Satellite Image Analysis Using Machine Learning**

Junbin XIAO, Yoko Yamakata, Takeshi Komai, Kazuyo Matsubae (Tohoku University)

**[P13] An Efficient Inference Architecture with Quantized Parallel Recurrent Neural Network for High Accurate Human Action Recognition System**

Yiming Song and Tetsuo Endoh (Graduate School of Engineering, and Center for Innovative Integrated Electronic Systems (CIES))