

# FP07

## Signal Processing II

13:30-15:30

Room : 1st Floor-Seefeld

Chair1 : Shinji Ohyama ( Tokyo Institute of Technology, Japan )

Chair2 :

13:30 – 13:50

FP07-1

### An Analog Voltage-mode Sorter For Real-time Signal Processing

Amphawan Chaikla, Maneerat Kaewrongkool, Chaleompun Wang-wiwattana, Anuchit Jaruwanaawat, Vanchai Riewruja(KMITL, THAILAND)

- Abstract
- Introduction
- Circuit Description
- Simulation Results
- Conclusion

13:50 – 14:10

FP07-2

### CANCELLATION OF ECHOES IN TELEPHONE NETWORK WITH THE ADAPTIVE STEP SIZE LATTICE FORM STRUCTURE

Chawalit Benjangkprasert , Sirirat Teerasakworakun, Sirithon Benchapornkullani, Kanok Janchithapongvej(KMITL, THAILAND)

- Introduction of an adaptive echoes canceller in telephone network and the propose
- The echoes canceller structure
- The Lattice/Transversal Joint structure
- The propose robust variable step-size algorithm for lattice form structure
- Performance evaluation
- Simulation results
- Conclusion

14:10 – 14:30

FP07-3

### On Application of QLMS and VSQLMS Adaptive Digital Filter in Satellite Communication System

Ornlarp Sangaroon, Jintana Griwan, Chawalit Benjangkprasert, Vanvisa Chutchavong(KMITL, THAILAND), Jintana Nakasuwana(Rajamangala Institute of Tech., THAILAND), Yoshiaki Moriya(Tokai Univ., JAPAN)

1. Introduction
2. Overview of Collected Data
3. Adaptive Digital Filter
4. Experiment and Results
5. Conclusion

14:30 – 14:50

FP07-4

### New sequential paired comparison method to decrease number of comparison using BMPC method

Fujio Toriumi, Jun-ya Takayama, Shinji Ohyama, Akira Kobayashi(Tokyo Institute of Tech., JAPAN)

- Introduction
- Algorithm of BMPC method
- Sequential solution method
- Simulation
- Conclusion

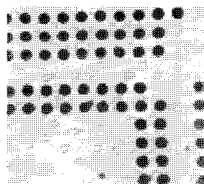
14:50 – 15:10

FP07-5

### Image Analysis for Detection of Defects of BGA by Using X-ray Imaging

Tetsuhiro SUMIMOTO, Toshinori MARUYAMA, Yoshiharu AZUMA, Sachiko GOTO(Okayama Univ., JAPAN), Munehiro MONDOU, Noboru FURUKWA(Pref. Hiroshima, JAPAN), Saburo OKADA(AIST, JAPAN)

- A high peak power demand at substations will result under This paper deals with the detection of defects at BGA solder joints in PC boards by using X-ray imaging.
- To improve a cost performance and reliability of PC boards, an inspection of BGA is required in the surface mount process.
- Contents 2 We attempt to detect the characteristic of the solder bridges based on an image analysis.



15:10 – 15:30

FP07-6

### Theoretical Analysis of the One-Bit-of-Information Conjecture for Independent Component Analysis

Zhi-yong Liu, Kai-chun Chiu, Lei Xu(Chinese Univ. of Hong Kong, CHINA)

Although supported by many empirical results, the so-called one-bit-of-information conjecture concerning the statement "knowing only the signs of source normalized kurtosis is sufficient for source recovery