

Tuesday, Oct. 20, 2009

8:30-9:00 Coffee Break

9:00-9:10

Opening Address by General Co-Chairs

9:10-10:00

Plenary Talk 1:

Low Correlation Zone Sequences over Finite Fields and Rings

Prof. Udaya Parampalli (University of Melbourne, Australia)

Session Chair : Pingzhi Fan (Southwest Jiaotong University, China)

10:00-10:30 Coffee Break

10:30-12:10

Session 1 : Optimal Sequences

Session Chair : Tetsuya Kojima (Tokyo National College of Technology, Japan)

1-1 Near Perfect Sequences of Odd Length

Rema Hariharan (Monash University, Australia)

1-2 Perfect Sequences over the Real Quaternions

Oleg Kuznetsov (Monash University, Australia)

1-3 A New Class of Quadriphase Even-Shift Orthogonal Sequences

Zi Long Liu, Yong Liang Guan, Boon Chong Ng

(Nanyang Technological University, Singapore)

1-4 A New Class of Optimal Variable-Weight OOCs Based on Cyclic Difference Families

Dianhua Wu, Pingzhi Fan (Southwest Jiaotong University, China),

Xun Wang (Guangxi Normal University, China),

Minquan Cheng (University of Tsukuba, Japan)

1-5 Construction of Binary Sequence Pairs with Two-level Periodic Autocorrelation Function

Kai Liu, Chengqian Xu (Yanshan University, China),

K.T. Arasu (Wright State University, USA)

12:10-14:10 Lunch

*at 'Raconter' (1st floor of Fukuoka International Congress Center)
or 'Lagoon' (1st floor of Fukuoka Sun Palace Hotel)*

14:10-15:50

Session 2 : ZCZ / LCZ Sequences

Session Chair : Hideyuki Torii (Kanagawa Institute of Technology, Japan)

- 2-1 A Generalized Construction of Optimal Zero- Correlation Zone Sequence Set from a Perfect Sequence**
Takafumi Hayashi (University of Aizu, Japan),
Shinya Matsufuji (Yamaguchi University, Japan)
- 2-2 On a ZCZ Code Including a Sequence Useful for Synchronization**
Shinya Matsufuji, Takahiro Matsumoto, Tomohiro Hayashida (Yamaguchi University, Japan),
Takafumi Hayashi (University of Aizu, Japan),
Noriyoshi Kuroyanagi (Chubu University, Japan),
Pingzhi Fan (Southwest Jiaotong University, China)
- 2-3 On BFSK-ZCZ-CDMA Systems**
Jincheng Huang, Shinya Matsufuji, Takahiro Matsumoto (Yamaguchi University Japan),
Noriyoshi Kuroyanagi (Chubu University, Japan),
Pingzhi Fan (Southwest Jiaotong University, China)
- 2-4 Constructions of Quadriphase Z- complementary Sequences**
Xudong Li (Xihua University, China),
Pingzhi Fan, Xiaohu Tang, Li Hao (Southwest Jiaotong University, China)
- 2-5 Classification of Optimal Quaternary Low Correlation Zone Sequence Sets**
Yang Yang, Zhengchun Zhou, Xiaohu Tang (Southwest Jiaotong University, China)

15:50-16:20 Coffee Break

16:20-18:20

Notice: Program has been changed because one presentation has moved to this session.

Session 3 : Communication Systems

Session Chair : Chao Zhang (Tsinghua University, China)

- 3-1 An Energy Saving Scheduling Scheme for OFDMA Two- hop Relay Systems**
Yanan Huang, Xuming Fang, Shufang Lin (Southwest Jiaotong University, China)
- 3-2 A Novel Iterative Data-aided Channel Estimation for Time Domain Synchronous-OFDM**
Ming Liu, Matthieu Crussière, Jean- François H elard (IETR / INSA de Rennes, France)
- 3-3 Analysis of Wireless Optical CDMA Using Chip-Level Detection**
Yusuke Kozawa, Hiromasa Habuchi (Ibaraki University, Japan)
- 3-4 Properties of the Pseudo-Ternary M- Sequences**
Ryo Enomoto, Hiromasa Habuchi (Ibaraki University, Japan)
- 3-5 A Low-Power Implementation of Arctangent Function for Communication Applications Using FPGA**
Mohamed Saber, Yutaka Jitsumatsu, Tohru Kohda (Kyushu University, Japan)
- 8-1 Non- Continuous Carrier- Interferometry Codes**
Chao Zhang (Tsinghua University, China)
Notice: This presentation has moved from Session 8.

Wednesday, Oct. 21, 2009

8:30-9:00 Coffee Break

9:00-9:50

Plenary Talk 2:

Cross- correlation of M- Sequences, Exponential Sums and Dickson Polynomials

Prof. Tor Helleseth (University of Bergen, Norway)

Session Chair : Hong-Yeop Song (Yonsei University, Korea)

9:50-10:20 Coffee Break

10:20-12:00

Session 4 : Decoders for Communications

Session Chair : Kyeongcheol Yang (Pohang University of Science and Technology, Korea)

4-1 Sum- Product Decoding of Convolutional Codes

Toshiyuki Shohon (Oyama National College of Technology, Japan),

Yuuichi Ogawa, Haruo Ogiwara (Nagaoka University of Technology, Japan)

4-2 Sum-Product Decoding of Convolutional Code for Wireless LAN Standard

Toshiyuki Shohon (Oyama National College of Technology Japan),

Fakhrur Razi, Yuuichi Ogawa, Haruo Ogiwara (Nagaoka University of Technology, Japan)

4-3 Performance Analysis of Threshold Decoder with Feedback for Self-Orthogonal Convolutional Codes

Muhammad Ahsan Ullah, Haruo Ogiwara (Nagaoka University of Technology, Japan)

4-4 Reduced Complexity- and- Latency Variable-to-Check Residual Belief Propagation Decoding Algorithms for LDPC Codes

Jung-Hyun Kim, Hong-Yeop Song (Yonsei University, Korea)

4-5 Chase- 3- Like Algorithms Achieving Bounded-Distance Decoding

Tingsu Yan, Yuansheng Tang (Yangzhou University, China),

Ming Chen (Southeast University, China)

12:00-14:00 Lunch

*at 'Raconter' (Fukuoka International Congress Center)
or 'Lagoon' (Fukuoka Sun Palace Hotel)*

14:00-15:00

Session 5 : Frequency Hopping Sequences

Session Chair : Udaya Parampalli (University of Melbourne, Australia)

5-1 Lower Bounds on the Periodic Partial Correlations of Frequency Hopping Sequences with Partial Low Hit Zone

Xianhua Niu, Daiyuan Peng, Fang Liu (Southwest Jiaotong University, China)

5-2 Design of No- Hit- Zone Frequency-Hopping Sequence Sets with Optimal Hamming Autocorrelation

Jin- Ho Chung, Yun Kyoung Han, Kyeongcheol Yang
(Pohang University of Science and Technology, Korea)

5-3 A New Construction of Optimal Frequency Hopping Sequence Sets

Zhengchun Zhou, Xiaohu Tang (Southwest Jiaotong University, China)

16:30-20:30 Optional Excursion : Kabuki Show

at 'Hakata-za' Theater

Notice: Please gather at the registration desk at 15:45.

Thursday, Oct. 22, 2009

8:30-9:00 Coffee Break

9:00-9:50

Plenary Talk 3:

Wireless Challenge

Prof. Fumiyuki Adachi (Tohoku University, Japan)

Session Chair : Naoki Suehiro (University of Tsukuba, Japan)

9:50-10:20 Coffee Break

10:20-12:00

Session 6 : Theoretical Analysis of Sequences

Session Chair : Tor Helleseth (University of Bergen, Norway)

6-1 Matrix Representations of Aperiodic Auto and Cross Correlation Functions

Yi-Chan Kao, Ying Li (Yuan Ze University, Taiwan)

6-2 A Note on Classification of Binary Signal Set in the View of Hadamard Equivalence

Ki-Hyeon Park, Hong-Yeop Song (Yonsei University, Korea)

6-3 Approximate Expression for Long Length Huffman Sequence

Yoshihiro Tanada (Daiichi Institute of Technology, Japan),
Kiminori Sato (Kagoshima University, Japan)

6-4 On Boston Bound for Cyclic Codes by DFT with Unknown Elements

Junru Zheng (Kyushu Women's University, Japan),
Takayasu Kaida (Kinki University, Japan)

6-5 A Note on Constant Weight Sequences over q -ary from Cyclic Difference Sets

Takayasu Kaida (Kinki University, Japan),
Junru Zheng (Kyushu Women's University, Japan)

12:00-14:00 Lunch

*at 'Raconter' (Fukuoka International Congress Center)
or 'Lagoon' (Fukuoka Sun Palace Hotel)*

14:00-15:40

Session 7 : Applications of Sequences

Session Chair : Chi-Chao Chao (National Tsing Hua University, Taiwan)

- 7-1 **An Inter-Cell Interference Reduction Method for Downlink Cellular Networks Based on Signal Autocorrelation**
Kai Yu, Pingzhi Fan, Li Hao (Southwest Jiaotong University, China)
- 7-2 **Experimental Evaluation of Parallel Transmission Using Optical ZCZ-CDMA System**
Takahiro Matsumoto, Yu Suwaki, Shinya Matsufuji (Yamaguchi University, Japan)
- 7-3 **A New Demodulation Procedure for CDMA Systems Based on Complete Complementary Codes**
Ryusuke Mayuzumi, Tetsuya Kojima (Tokyo National College of Technology, Japan)
- 7-4 **On Digital Watermarks Based on Complete Complementary Codes**
Yoshiya Horii, Tetsuya Kojima (Tokyo National College of Technology, Japan)
- 7-5 **A Study on Digital Watermarking Scheme Using Direct-sequence Spread Spectrum for High Quality Music**
Makoto Nakamura, Hideyuki Torii (Kanagawa Institute of Technology, Japan),
Motoka Nagashima (Inter Technologies, Ltd., Japan)

15:40-16:10 Coffee Break

16:10-17:30

Notice : Program has been changed since the Paper 8-1 has moved to Session 3.

Session 8 : Miscellaneous Sequences / Codes 1

Session Chair : Xiaohu Tang (Southwest Jiaotong University, China)

- 8-2 **A New Class of Constant Composition Codes**
Jinquan Luo (Nanyang Technological University, Singapore),
Yuansheng Tang (Yangzhou University, China)
- 8-3 **Design of Irregular Quasi-Cyclic LDPC Codes Based on Euclidean Geometries**
Xueqin Jiang, Moon Ho Lee (Chonbuk National University, Korea)
- 8-4 **Fast Distributed Space-Time Block Code in Wireless Relay Networks**
Wei Song, Moon Ho Lee (Chonbuk National University, Korea)
- 8-5 **A Combined Decoder for STBC and Non-Binary LDPC Codes with Spatial Diversity**
Yier Yan, Xueqin Jiang, Moon Ho Lee (Chonbuk National University, Korea)

19:00-21:00 Banquet

at 'Ozen-ya-Iori' (2nd basement of Hakata-za Theater)

Notice: Please gather at the registration desk at 18:30.

Friday, Oct. 23, 2009

8:30-9:00 Coffee Break

9:00-10:00

Notice : Program has been changed since the paper 9-1 has been cancelled.

Session 9 : Miscellaneous Sequences / Codes 2

Session Chair : Akio Tsuneda (Kumamoto University, Japan)

9-2 New p -ary Sequences with Low Correlation and Large Family Size

Fang Liu, Daiyuan Peng, Xiaohu Tang, Xianhua Niu (Southwest Jiaotong University, China)

9-3 A Study on Initial Values of the Logistic Map over Integers

Shunsuke Araki (Kyushu Institute of Technology, Japan),

Takeru Miyazaki, Satoshi Uehara (The University of Kitakyushu, Japan)

9-4 A Study on Relations between Loops in Sequences Generated by the Logistic Map over Integers and Real Numbers

Takeru Miyazaki (The University of Kitakyushu, Japan),

Shunsuke Araki (Kyushu Institute of Technology, Japan),

Satoshi Uehara (The University of Kitakyushu, Japan)

10:00-10:30 Coffee Break

10:30-11:30

Notice : Program has been changed since the paper 9-1 has been cancelled.

Session 10 : Performance Analysis of Communication Systems

Session Chair : Li Hao (Southwest Jiaotong University, China)

10-1 Performance Evaluation of Spreading Sequences with Negative Auto-correlation Based on Chaos Theory and Gold Sequences

Akio Tsuneda, Yasunori Miyazaki (Kumamoto University, Japan)

10-2 BER and Ergodic Capacity of Dual-hop Relay Channel in Nakagami- m Fading

Xianfu Lei, Pingzhi Fan (Southwest Jiaotong University, China),

P. Takis Mathiopoulos (National Observatory of Athens, Greece)

10-3 On Transmission Characteristics of Lattice Wireless Networks

Takayuki Hirano, Shinya Matsufuji, Takahiro Matsumoto, Koichi Takimoto, Fusanori Miura

(Yamaguchi University, Japan)

12:00-17:00 Optional Tours:

Umino-Nakamichi Seaside Park / Marine World