

The 8th Symposium on Algebra and Computation (AC2009)

Tokyo Metropolitan University

2 - 4 December 2009

<http://tnt.math.metro-u.ac.jp/ac/2009/>

Organizers

Ken Nakamura (Tokyo Metropolitan Univ.)

Katsushi Waki (Yamagata Univ.)

Hirofumi Tsumura (Tokyo Metropolitan Univ.)

Shigenori Uchiyama (Tokyo Metropolitan Univ.)

Program

Dec. 2 (Wed.)

9:55 - 10:00: Opening

10:00 - 10:20: Huiling Song, Hiroyuki Ito (Hiroshima University)

“On the construction of huge finite fields”

10:20 - 10:40: Makoto Araya (Shizuoka University)

“Mutually disjoint Steiner systems $S(5, 8, 24)$ and $5-(24,12,48)$ designs”

11:00 - 11:40: Satoshi Matsuoka (National Institute of Advanced Industrial Science and Technology)

“A coding theoretical study on MLL proof nets”

13:30 - 14:20: [Special lecture] Ichiro Hasuo (RIMS, Kyoto University/ PRESTO, JST)

“The Microcosm Principle and Component Calculi: Universal Algebra and Coalgebra in Computer Science”

14:40 - 15:10: Koji Chinen (Kinki University)

“ On the Riemann hypothesis for the invariant polynomials constructed from the general Hamming codes”

15:10 - 15:40: Masaaki Harada (Yamagata University/ PRESTO, JST)

“ Extremal Type II \mathbb{Z}_{2k} -codes”

16:00 - 16:20: Tsuyoshi Miezeki (Hokkaido University), Eiichi Bannai (Kyushu University)

“On a property of 2-dimensional integral Euclidean lattices”

16:20 - 16:50: Yasutsugu Fujita (Nihon University), Nobuhiro Terai (Ashikaga Institute of Technology)

“Generators for the elliptic curve $E : y^2 = x^3 - nx$ ”

Dec. 3 (Thu.)

10:00-10:20: Ryozo Morikawa (Tokyo Metropolitan University)

“Some concepts and methods to investigate problems of Waring type II”

10:20 - 10:50: Yukiko Sakai, Ki-ichiro Hashimoto (Waseda University)

“General form of Humbert ’s modular equation for curves with real multiplication by $\sqrt{2}$ ”

11:10 - 11:40: Ryoko Oishi (High Energy Accelerator Research Organization)

“Lattice determination for 3-dimensional powder crystals using topographs.”

13:30 - 14:20: [Special lecture] Shigeru Kuroda (Tokyo Metropolitan University)

“Some topics of polynomial rings”

14:35 - 15:10: Yoshihiro Seino, Hitoshi Yoshida, Yasumasa Kanada (The University of Tokyo)

“Introduction to Properties of Zeros of Riemann Zeta Function and its Computation”

15:10 - 15:40: Leo Murata (Meiji Gakuin University), Yuichi Kamiya (Daito Bunka University)

“A relation between arithmetical functions and code systems”

16:00 - 16:20: Tetuya Taniguti (Tokyo University of Science)

“Fast computation of irregular prime”

16:20 - 16:40: Takehiro Hasegawa (Tsuru University), Miyoko Inuzuka, Takafumi Suzuki

“Several numerical evidences of Elkies’ conjecture”

Dec. 4 (Fri.)

10:00 - 10:20: Takao Komatsu (Hirosaki University), Chris K. Caldwell (University of Tennessee at Martin)

“Powers of Sierpinski numbers base b ”

10:20 - 10:40: Naoyuki Horiguchi (Chiba University)

“A note on the rank 3 and 4 graphs invariant under the Hall-Janko group”

11:00 - 11:30: Takato Hirano, Keisuke Tanaka (Tokyo Institute of Technology)
Tsurumaki(Oracle Corporation Japan)

“Primitive Power Roots of Unity and Its Application to Encryption”

11:30 - 12:00: Yoshitaka Sasaki, Yasuo Ohno, Chika Yamazaki (Kinki University)

“On comparison of a classical algorithm and a quantum algorithm for a certain discrete logarithm problem”

– JANT Session 『Mathematics of Cryptography and Lattices』 –

14:00 - 14:10: Jun Kogure (FUJITSU LABORATORIES)

“Mathematics of Cryptography and Lattices”

14:10 - 15:00: Ichiro Shimada (Hiroshima University)

“Supersingular K3 surfaces and lattice theory”

15:20 - 16:10: Keisuke Tanaka (Tokyo Institute of Technology)

“On fully homomorphic encryption using ideal lattices - a brief survey”

16:10 - 17:00: Noboru Kunihiro (The University of Tokyo)

“Lattice Based Cryptanalysis on RSA Related Problems”

17:00 - 17:10: Closing