

# The 10th Symposium on Algebra and Computation (AC2013)

## Organizers

Hirofumi Tsumura (Tokyo Metropolitan Univ.)  
Shigenori Uchiyama (Tokyo Metropolitan Univ.)  
Katsushi Waki (Yamagata Univ.)  
Takuya Ikuta (Kobe Gakuin Univ.)  
Yukihiro Uchida (Tokyo Metropolitan Univ.)

Date: 17(Tue.) – 19(Thu.) December 2013

Place: Tokyo Metropolitan University Room 204 in Building No. 11

[Program]

Dec. 17 (Tue.)

**10:20 - 10:25:** Opening

**10:30 - 11:00:** Takao Komatsu (Hirosaki University)

”Balancing with binomial coefficients”

**11:00 - 11:30:** O.Khadir (University of Hassan II Mohammedia-Casablanca), Takao Komatsu (Hirosaki University)

”On the modular equation  $3^x \equiv b \pmod{p}$  when  $p$  is prime”

**11:40 - 12:00:** Ryoza Morikawa (Professor Emr. Nagasaki University)

”Decomposition of a set of integers as a direct sum of two subsets”

**14:00 - 14:50:** [Special lecture] Yoshiyuki Yokota (Tokyo Metropolitan University)

”Dilogarithm functions and knot invariants”

**15:00 - 15:30:** Sho Takemori (Kyoto University)

”Computation of Siegel modular forms of degree 2 with Sage”

**15:30 - 15:50:** Nao Takeishi (Tsuda College)

”Method and calculation of finding all elliptic curves with good reduction everywhere over number fields”

**16:00 - 16:50:** [Special lecture] Kenichi Kawarabayashi (National Institute of Informatics)

”Algorithms and analysis of huge graph”

Dec. 18 (Wed.)

**10:00 - 10:30:** Koji Momihara (Kumamoto University)

"The problem on inequivalence of skew Hadamard difference sets"

**10:30 - 11:00:** Yoshitaka Sasaki (Osaka University of Health and Sport Sciences), Yasuo Ohno (Kinki University)

"Various properties of poly-Euler numbers"

**11:10 - 11:40:** Yasuyuki Hirano (Naruto University of Education), Takao Sumiyama (Aichi Institute of Technology)

"On repeated iterations of some operations on positive integers"

**13:30 - 14:20:** [Special lecture] Hiroshi Nozaki (Aichi University of Education)

"An algorithm for an embedding of a directed graph to a complex sphere"

**14:35 - 15:05:** Masatake Hirao (Tokyo Woman's Christian University), Masanori Sawa (Nagoya University)

"Characterizing optimum experimental designs in terms of finite irreducible reflection groups"

**15:05 - 15:30:** Yiling Lin (Nagoya University), Miwako Mishima (Gifu University), Junya Satoh (Nagoya University), Masakazu Jimbo (Nagoya University)

"The multiplicative order of a unit and its application to equi-difference conflict avoiding codes"

**15:45 - 16:05:** Kohei Yamada (Tokyo University of Science), Nobuko Miyamoto (Tokyo University of Science)

"Construction of Orthogonal Arrays from Baer subplanes"

**16:05 - 16:35:** Masanori Sawa (Nagoya University)

"Ellison's error – Waring's problem"

**16:45 - 17:15:** Sho Suda (Aichi University of Education), Hiroshi Nozaki (Aichi University of Education)

"Association schemes related to weighing matrices"

Dec. 19 (Thu.)

**10:00 - 10:30:** Shun'ichi Yokoyama (Kyushu University)

"Computing resultant matrix of general multivariate polynomials and its determinant using Magma"

**10:40 - 11:10:** Shin Harase (Tokyo Institute of Technology), Ryuichi Ohori (The University of Tokyo)

"A search for extensible low-WAFOM point sets"

**13:30 - 14:20:** [Special lecture] Iwao Kimura (Nagoya University)

"Computation of Modular Forms"

**14:30 - 15:00:** Tetsuya Taniguchi (Gakushuin University)

"On Fast Computation of "Round Robin GCD"

**15:00 - 15:30:** Takanori Yasuda (Institute of Systems, Information Technologies and Nanotechnologies), Tsuyoshi Takagi (Kyushu University), Kouichi Sakurai (Kyushu University / Institute of Systems, Information Technologies and Nanotechnologies)

"Pairing-Friendly Reductions of Elliptic Curves over Number Fields"

**15:40 - 16:00:** Akira Miyawaki (Osaka University), Takanori Ayano (Osaka University), Joe Suzuki (Osaka University)

"Toward Pairing-based Cryptography using Super-elliptic Curves-Using Harasawa-Suzuki Representation-"

**16:00 - 16:20:** Kenichiro Hayasaka (Kyushu University), Kazumaro Aoki (NTT Secure Platform Laboratories), Tetsutaro Kobayashi (NTT Secure Platform Laboratories), Tsuyoshi Takagi (Kyushu University)

"A Construction of 3-dimensional Lattice Sieve for Number Field Sieve over  $GF(p^n)$ "

**16:20 - 16:40:** Ryosuke Takahashi (Okayama University), Yasuyuki Nogami (Okayama University)

"Cyclic Vector Multiplication Algorithm for Extension Field and Its Application to Subfields"

**16:40 - 16:50:** Closing