

RIMS Workshop
Finite Groups and Algebraic Combinatorics

Organizers: Masaaki Harada (Yamagata University)
Masaaki Kitazume (Chiba University)

December 17, 10:00 – December 20, 15:10, 2007
Room 420, Research Institute for Mathematical Sciences (RIMS), Kyoto University

Program

December 17 (Monday)

- 10:00–10:50 Jonathan Hall (Michigan State University)
Groups with triality
- 11:00–11:50 Masahiko Miyamoto (University of Tsukuba)
Strongly p -embedded subgroups and modular representations
- 13:20–13:50 Nobuo Iiyori (Yamaguchi University)
Burnside rings and dual lattice Burnside rings of finite groups
- 14:00–14:30 Hiroshi Murakami (Kumamoto University)
The complementary graphs of prime graphs of finite groups
- 14:40–15:10 Takashi Yoguchi (Chiba University)
On the relationship between rational-valued characters and prime graphs of finite groups
- 15:25–15:55 Naoki Chigira (Muroran Institute of Technology)
Characterization of groups by equations with two variables over the groups
- 16:05–16:35 Katsuhiro Uno (Osaka Kyoiku University)
 $[P, P]$ -perfect isometries I
- 16:45–17:15 Ryo Narasaki (Osaka University)
 $[P, P]$ -perfect isometries II

December 18 (Tuesday)

- 10:00–10:50 Paul Terwilliger (University of Wisconsin–Kanazawa University)
Recent results on Tridiagonal pairs
- 11:00–11:50 Hiroshi Suzuki (International Christian University)
2-homogeneity and completely regular strongly regular subgraphs
– Variations of a theorem of K. Nomura by his results –

- 13:20–13:50 Hajime Tanaka (Tohoku University)
On the displacement decomposition of a Q -polynomial distance-regular graph
- 14:00–14:30 Raimundas Vidunas (Kobe University)
Simultaneously lowering operators
- 14:40–15:10 Rie Hosoya (International Christian University)
On Terwilliger algebras with respect to subsets in Hamming graphs and Johnson graphs
- 15:25–15:55 Izumi Miyamoto (University of Yamanashi)
Simple 3-designs on $q + 2$ points constructed from $PSL(2, q)$, $q \equiv 3 \pmod{4}$
- 16:05–16:35 Kazumichi Kuzuta (Chiba University)
On a 2-design related to the Rudvalis group
- 16:45–17:15 Kazuhiko Ushio (Kinki University)
Balanced C_6 -bowtie designs – p -orbits and L -orbits –

December 19 (Wednesday)

- 9:50–10:40 Etsuko Bannai (Kyushu University)
More about Euclidean designs
- 10:50–11:20 Masashi Shinohara (Kyushu University)
On locally two-distance sets
- 11:30–12:00 Hiroshi Nozaki (Kyushu University)
An upper bound for inner product sets in Euclidean space
- 13:20–13:50 Keisuke Shiromoto (Aichi Prefectural University)
Constructions of quantum jump codes
- 14:00–14:30 Takayuki Okuda (Kyushu University)
Riemann hypothesis analogue for some invariant rings
- 14:40–15:10 Hiroki Tamura (Tohoku University)
A remark on the codes and the lattices of Hadamard matrices
- 15:25–15:55 Hiroaki Kido (Kyushu University)
Classification of isosceles sets which have the maximum cardinality in 4-dimensional Euclidean space
- 16:05–16:35 Takahiro Ashihara (University of Tsukuba)
A counterexample to the subalgebra conjecture
- 16:45–17:15 Masaaki Harada (Yamagata University)
An extremal doubly even self-dual code of length 112

December 20 (Thursday)

- 9:50–10:40 Peter Webb (University of Minnesota)
The module structure of the coinvariant algebra of a finite group representation

10:50–11:20 Hiroshi Mizukawa (National Defense Academy)

On a generalization of a Gelfand pair (S_{2n}, H_n)

11:30–12:00 Fuminori Tasaka (Chiba University)

On the Glauberman correspondence

13:20–13:50 Nobuo Nakagawa (Kinki University)

Equations over finite fields of characteristic 2 and differentially 4-uniform functions

14:00–14:30 Hiroaki Taniguchi (Takuma National College of Technology)

On d -dual hyperovals in $PG(2d, 2)$

14:40–15:10 Yutaka Hiramane (Kumamoto University)

On factor sets and constructions of relative difference sets