

RIMS Joint Research 'Designs, Codes, Graphs and Related Areas'

This is the workshop which will take place as a part of the joint research service of Research Institute for Mathematical Sciences (RIMS) in the 2012 fiscal year.

Dates: Tuesday 17th July to Thursday 19th July 2012.

Venue: RIMS, Kyoto University, Room 420
Kyoto 606-8502 Japan¹

Program

17th July

13 : 00 – 13 : 50 Etsuko Bannai (Shanghai)
On relative t -designs on Q -polynomial schemes

14 : 00 – 14 : 50 Yusuke Higuchi (Showa University)
Some topics on spectral geometric analysis on graphs

15 : 10 – 16 : 00 Masatake Hirao (Tokyo Woman's Christian University)
Constructing optimal designs and related topics

16 : 10 – 17 : 00 Masashi Shinohara (Suzuka National College of Technology),
Hiroshi Nozaki (Aichi University of Education)
On distance sets and graphs

18th July

9 : 00 – 9 : 50 Hideyuki Tanaka (Ritsumeikan University)
Cubature on Wiener space and related topics in numerical analysis

10 : 00 – 10 : 50 Yutaka Hiramine (Kumamoto University)
On Butson Hadamard matrices and an extension of difference matrices

11 : 00 – 11 : 50 Takuji Nakashima (Hiroshima University)
Discussion on a graph partitioning problem and geometric separators
– Toward a better domain decomposition method for computational fluid dynamics –

14 : 00 – 14 : 50 Akira Saito (Nihon University)
Forbidden subgraphs generating a finite set

¹RIMS is easily accessible by a number of public transportation services provided conveniently throughout Kyoto City. Details can be found in <http://www.kurims.kyoto-u.ac.jp/en/access-01.html>

15 : 00 – 15 : 50 Hiroki Shimakura (Tohoku University)
Analogies between codes, lattices and vertex operator algebras

16 : 00 – 16 : 50 Eiichi Bannai (Shanghai Jiao Tong University)
Some problems related to spherical designs
– Spherical designs of harmonic index t (joint work with Makoto Tagami) and
the existence problem of rational t -designs –

19th July

9 : 00 – 9 : 50 Tomoki Nakamigawa (Shonan Institute of Technology)
Pebble motion and pebble exchange on graphs

10 : 00 – 10 : 50 Hirotake Kurihara (Kyoto University)
On design theory of antipodal sets on compact symmetric spaces

11 : 00 – 11 : 50 Koichi Betsumiya (Hirosaki University)
On triply even codes

14 : 00 – 14 : 50 Atsuhiro Nakamoto (Yokohama National University)
Polychromatic coloring of graphs on surfaces

15 : 00 – 15 : 50 Koji Momihara (Kumamoto University)
On strongly regular graphs $Cay(\mathbb{F}_q, D)$ and rationality of relative Gauss sums

16 : 00 – 16 : 50 Jun Fujisawa (Keio University)
On matching extension of graphs on closed surfaces

We are also planning a poster exhibition by the following young researchers:

Michitaka Furuya (Tokyo University of Science)
On the diameter of domination critical graphs

Yiling Lin (Nagoya University)
Tight equi-difference conflict-avoiding codes with odd length and weight 3

Tetsuji Taniguchi (Matsue College of Technology)
A hierarchical structure of graphs by the smallest eigenvalue

Organizer:

Masanori Sawa (Nagoya University)

Organizing Committee Members:

Jun Fujisawa (Keio University)

Masatake Hirao (Tokyo Woman's Christian University)

Hiroshi Nozaki (Aichi University of Education)