

**Kyoto International Conference
on
Computational Geometry and Graph Theory
in honor of Jin Akiyama and Vašek Chvátal on their 60th birthdays
(KyotoCGGT2007)**

Schedule

Room A = Centennial Hall (1st Floor)

Room B = International Conference Hall I (2nd Floor)

Room C = International Conference Hall III (2nd Floor)

June 11 (Monday)			
	Room A	Room B	Room C
09:50–10:10	Opening Ceremony		
10:10–11:00	Plenary 01		
	Break		
11:10–12:00	Plenary 02		
	Lunch		
13:30–14:20	Plenary 03		
	Break		
14:40–16:00	Session 01A	Session 01B	Session 01C
	Coffee Break		
16:30–17:50	Session 02A	Session 02B	Session 02C

June 12 (Tuesday)			
	Room A	Room B	Room C
09:10–10:00	Special Talk		
	Break		
10:10–11:00	Plenary 04		
	Break		
11:20–12:20	Session 03A	Session 03B	Session 03C
	Lunch		
13:50–14:40	Plenary 05		
	Break		
15:00–16:20	Session 04A	Session 04B	Session 04C
	Coffee Break		
16:50–18:10	Session 05A	Session 05B	Session 05C

June 13 (Wednesday)	
	Special Event @ Room A
14:30–15:30	Lecture by Prof. M. Koshihba (Nobel Prize Winner for Physics) 宇宙と素粒子
	Break
15:50–17:20	Lecture by Prof. J. Akiyama (Tokai University) 登れども登れども未だ麗かな, されど挑戦の日々ー離散幾何学の研究からー

June 14 (Thursday)			
	Room A	Room B	Room C
09:10–10:00	Plenary 06		
	Break		
10:10–11:00	Plenary 07		
	Break		
11:20–12:20	Session 06A	Session 06B	Session 06C
	Lunch		
13:40–14:30	Plenary 08		
	Break		
14:50–15:50	Session 07A	Session 07B	Session 07C
	Coffee Break		
16:20–17:00	Session 08A	Session 08B	Session 08C
18:30–21:00	Conference Banquet @ Kyoto Royal Hotel		

June 15 (Friday)			
		Room B	Room C
09:10–10:00		Plenary 09	
		Break	
10:10–11:00		Plenary 10	
		Break	
11:20–12:20		Session 09B	Session 09C
		Lunch	
13:50–15:10		Session 10B	Session 10C
		Coffee Break	
15:40–17:00		Session 11B	Session 11C
17:00–17:10		Closing Ceremony	

Program

Special Event (Both lectures will be given in Japanese.)

June 13 (Wednesday), 14:30–15:30

宇宙と素粒子

Masatoshi Koshiha (Nobel Prize Winner for Physics)

June 13 (Wednesday), 15:50–17:20

登れども登れども未だ麗かな, されど挑戦の日々—離散幾何学の研究から—

Jin Akiyama (Tokai University)

Special Talk

June 12 (Tuesday), 09:10–10:00

Eighty-four days, twenty-eight years

Vašek Chvátal (Canada Research Chair in Combinatorial Optimization Department of Computer Science and Software Engineering, Concordia University)

Plenary Talks

01: June 11 (Monday), 10:10–11:00

Graph Colouring a la Chvátal

Bruce Reed (McGill University)

02: June 11 (Monday), 11:10–12:00

Computer-Aided Creation of Impossible Objects and Impossible Motions

Kokichi Sugihara (University of Tokyo)

03: June 11 (Monday), 13:30–14:20

Comparing Musical Sequences via Linear Assignment Problems

Godfried T. Toussaint (McGill University)

04: June 12 (Tuesday), 10:10–11:00

A Computational Study of the Traveling Salesman Problem

William Cook (Georgia Institute of Technology)

05: June 12 (Tuesday), 13:50–14:40

Jin Akiyama and his Geometry

Jorge Urrutia (Universidad Nacional Autónoma de México)

06: June 14 (Thursday), 09:10–10:00

Chvátal-Erdős Theorem —Old Theorem with New Aspects—

Akira Saito (Nihon University)

07: June 14 (Thursday), 10:10–11:00

Unexpected Twists in Geometric Dissections

Greg N. Frederickson (Purdue University)

08: June 14 (Thursday), 13:40–14:30

Unfolding (and Folding) Orthogonal Polyhedra

Joseph O'Rourke (Smith College)

09: June 15 (Friday), 09:10–10:00

Compatible Configurations

Ferran Hurtado (Universitat Politècnica de Catalunya)

10: June 15 (Friday), 10:10–11:00

On the Structure of String Graphs

János Pach (City College, CUNY and Rényi Institute)

Contributed Talks

Each contributed talk will be 20 minutes, including questions and answers.

June 11 (Monday)

Session 01A [14:40–16:00]

A new variety of flexatube and reversible polyhedral surfaces

H. Maehara

Developments of Platonic Solids with Minimum Perimeters

*J. Akiyama, G. Nakamura and M. J. Ruiz**

Jigsaw Puzzles, Edge Matching, and Polyomino Packing: Connections and Complexity

E. D. Demaine and M. L. Demaine*

Enumeration of Polyominoes, Polyiamonds and Polyhexes for Tilings with Rotational Symmetry

H. Fukuda, N. Mutoh, G. Nakamura and D. Schattschneider*

Session 01B [14:40–16:00]

Partitioning a Polygon into Two Congruent Pieces

D. El-Khechen, T. Fevens, J. Iacono and G. Rote*

Separating Blue Points with Red Segments

C. Cortés, D. Garijo, M. A. Garrido, C. Grima, A. Márquez, A. Moreno, J. Portillo, P. Revuelta, P. Reyes, R. Robles, E. Suárez, J. Valenzuela and T. Villar*

Bichromatic separability with two boxes

C. Cortés, J. M. Díaz-Báñez, P. Pérez-Lantero, C. Seara, J. Urrutia and I. Ventura*

Separating a bicolored point set by spheres

Y. Okamoto and H. Tsubouchi*

Session 01C [14:40–16:00]

Lower and upper bounds of the maximum number of Slater's orders of tournaments

*I. Charon and O. Hudry**

Computing minimum $\mathcal{H}$ -transversals of some special classes of graphs

P. Hell, M. Groshaus, S. Klein, L. T. Nogueira and F. Protti*

On Matching Robustness and Geometric Stable Marriage

V. Polishchuk, E. M. Arkin, B. Aronov, K. Barnard, K. Coogan, A. Efrat and J. S. B. Mitchell*

Longest Path Problems on Ptolemaic Graphs

*Y. Takahara, S. Teramoto and R. Uehara**

Session 02A [16:30–17:50]

A new algorithmic upper bound for the chromatic number of a graph

I. Schiermeyer

Bounding χ in terms of ω and Δ for quasi-line graphs

A. King and B. Reed*

Approximability for improper colouring of unit disk graphs

R. J. Kang

Local 7-Coloring for Planar Subgraphs of Unit Disk Graphs

J. Czyzowicz, S. Dobrev, H. González-Aguilar, R. Kralovic, E. Kranakis, J. Opatrny, L. Stacho and J. Urrutia*

Session 02B [16:30–17:50]

Convex Quadrilaterals of Point Sets with Disjoint Interiors

M. Lomeli-Haro, T. Sakai and J. Urrutia*

The isometric boundary problem

N. Dolbilin

A point set with specified disjoint empty convex subsets

*K. Hosono and M. Urabe**

Divide and Conquer Method for k -set Polygons

W. E. Oraiby and D. Schmitt*

Session 02C [16:30–17:50]

Super edge-magic strength and deficiency of a graph

A. A. G. Ngurah, E. T. Baskoro, R. Simanjuntak and S. Uttunggadewa*

Generation of graceful trees through graceful codes

*K. Balasubramanian and N. Chandramowliswaran**

Arithmetical properties of tree generation codes and algorithm to generate all tree codes for a given number of edges

K. Balasubramanian, N. Chandramowliswaran, N. Ramachandran, S. Arun and P. Kumar*

Graphs Appearing in Discrete Tomography

*A. Kaneko and R. Nagahama**

June 12 (Tuesday)**Session 03A** [11:20–12:20]

Transforming Graphs with the Same Graphic Sequence

S. Bereg and H. Ito*

On the number of components in 2-factors of claw-free graphs III

K. Yoshimoto

On Graphs whose Square Have Strong Hamiltonian Properties

G. L. Chia , S.-H. Ong and L. Y. Tan*

Session 03B [11:20–12:20]

Some Combinatorial and Algorithmic Applications of the Borsuk-Ulam Theorem

*S. Roy and W. Steiger**

Two-Guarding Art Galleries

X. Tan

Computing Simple Paths on Points in Simple Polygons

O. Daescu and J. Luo*

Session 03C [11:20–12:20]

The Hamiltonian Number of (m, n) -graphs

N. Punnim and S. Thaithae*

The Hamiltonian Number of Cubic graphs

*N. Punnim and S. Thaithae**

The forest number in (m, n) -graphs

A. Chantasatrasmee and N. Punnim*

Session 04A [15:00–16:20]

Cow-Paths Revisited

D. Kirkpatrick

Searching a Circular Corridor by Two Boundary 1-Searchers

T. Kameda, J. Z. Zhang and M. Yamashita*

Vertex Guards in Rectilinear Polygons with Holes

F. Hoffmann, K. Kriegel and C. D. Tóth*

Enumerating Non-crossing Minimally Rigid Frameworks

D. Avis, N. Katoh, M. Ohsaki, I. Streinu and S. Tanigawa*

Session 04B [15:00–16:20]

Fundamental Discrete Algorithms on Statistical Exponential Families

F. Nielsen

Optimal Highway Location Problem

M. Korman and T. Tokuyama*

Finding segments and triangles spanned by points in $\mathbb{R}^3$

*S. Bitner and O. Daescu**

From Triangles to Curves

M. Teillaud

Session 04C [15:00–16:20]

Geometric realization of a triangulation on the projective plane with one face removed

A. Nakamoto

The number of flips to obtain non-crossing geometric cycles

Y. Oda and M. Watanabe*

Notes on the twisted graph

*E. Omaña-Pulido and E. Rivera-Campo**

On the Intersection Graphs of Halfplanes and of Line Segments in the Plane

S. V. Gervacio

Session 05A [16:50–18:10]

Distance trisector curves between a point and a line

*J. Chun, M. Korman, Y. Okada and T. Tokuyama**

Balanced subdivision of two sets of points in the plane lattice

M. Kano, T. Kawano and M. Uno*

Moving Walkways, Escalators, and Elevators

J. Cardinal, S. Collette, F. Hurtado, S. Langerman and B. Palop*

Paths with no small angles

*I. Bárány, A. Pór and P. Valtr**

Session 05B [16:50–18:10]

Geometric Derivation of the Buneman Index by Polyhedral Split Decomposition

S. Koichi

On generalizations of distance sets

M. Shinohara

On generalized shelling sets, kernel mappings and point-configuration mappings

F. Domenach and M. Hachimori*

The distribution of vertices of degree five in a contraction-critically 5-connected graph

K. Ando and T. Iwase*

Session 05C [16:50–18:10]

On Quasi-Kernels of Digraphs

K. M. Koh

Some complete bipartite Ramsey numbers

Hasmawati, H. Assiyatun, E. T. Baskoro and A. N. M. Salman*

($d+1, 2$)-Track Layout of Bipartite Graph Subdivisions

M. Miyauchi

Construction of Araucaria Trees

D. Schmitt and J.-C. Spehner*

June 14 (Thursday)

Session 06A [11:20–12:20]

New results on lower bounds for the number of ($\leq k$)-facets

*O. Aichholzer, J. García, D. Orden and P. Ramos**

Sum-Product Theorems and Incidence Geometry

J. Solymosi

On Polygons Enclosing Point Sets

*F. Hurtado, C. Merino, D. Oliveros, T. Sakai, J. Urrutia and I. Ventura**

Session 06B [11:20–12:20]

Restricted Edge Contractions in Surface Triangulations

M. Moriguchi and K. Sugihara*

Gems: A general data structure for d -dimensional triangulations

*A. J. Montagner and J. Stolfi**

Non-deterministic Triangulations of Euclidean Manifolds

J. G. Escudero

Session 06C [11:20–12:20]

A Plane Graph Representation for Tripartitions of a Triconnected Graph

S. Ota and H. Nagamochi*

Fast Skew Partition Recognition

W. S. Kennedy and B. A. Reed*

Pivot and Gomory Cut

*S. Ghosh and R. B. Hayward**

Session 07A [14:50–15:50]

A Linear Time Algorithm for Symmetric Convex Drawings of Triconnected Planar Graphs

*S.-H. Hong and H. Nagamochi**

Ortho-radial drawings

M. Hasheminezhad, S. M. Hashemi and M. Tahmasbi*

An $O(n^3)$ -time recognition algorithm for hhds-free graphs

C. T. Hoàng

Session 07B [14:50–15:50]

Dudeney transformation of normal tiles

J. Akiyama, M. Kobayashi and G. Nakamura*

Deflating The Pentagon

*E. D. Demaine, M. L. Demaine, D. L. Souvaine and P. Taslakian**

Colorings of Tilings Derived from a Development of a Doubly-Covered Square

*J. Akiyama and C. Nara**

Session 07C [14:50–15:50]

On posets with double bound graphs which contain a star graph as an induced subgraph

*K. Ogawa**, *S. Tagusari* and *M. Tsuchiya*

On upper bound graphs with respect to an edge increaseing and decreaseing

S. Tagusari

On upper bound graphs with forbidden subgraphs

A. Kawamura, *K. Ogawa*, *S. Tagusari* and *M. Tsuchiya**

Session 08A [16:20–17:00]

Some Results on Fractional Graph Theory

L. Guizhen

On Cycle Axion of Hypergraphs

J. Wang

Session 08B [16:20–17:00]

Combinatorial conditions for the rigidity of tensegrity frameworks

A. Recski

Enumerating Constrained Non-crossing Geometric Spanning Trees

N. Katoh and *S. Tanigawa**

Session 08C [16:20–17:00]

Most-parsimonious extensions of a partial assignment on a unicycle graph

*K. Miyakawa** and *H. Narushima*

On Page Number of Posets

A. B. Kwiatkowska and *M. M. Syslo**

June 15 (Friday)

Session 09B [11:20–12:20]

SUDOKU colorings of the Hexagonal Bipyramid Fractal

H. Tsuiki

Winning Ways of Weighted Poset Games

H. Ito, *G. Nakamura* and *S. Takata**

Separation from membership and folklore

J. F. Maurras

Session 09C [11:20–12:20]

Recent results on the existence of vertex-disjoint stars in graphs

S. Fujita

A degree condition for a bipartite graph to have a regular factor

H. Matsuda

Generalization of theorem of Edmonds

*N. Kamiyama**, *N. Katoh* and *A. Takizawa*

Session 10B [13:50–15:10]

Seven types of random spherical triangle in S^n and their probabilities

Y. Maeda

The asymptotic volume of the Birkhoff polytope

E. R. Canfield and *B. D. McKay**

Distance-Geometric Properties of Euclidean Rhythms

F. Gomez-Martin, *P. Taslakian** and *G. T. Toussaint*

Geometry and Harmony
D. Rappaport

Session 10C [13:50–15:10]

A Proof of an Asymptotic Version of a Conjecture by Enomoto and Ota
C. Magnant and D. Martin*

A set of labeled trees and a set of clique trees of a chordal graph
H. Shinohara

Independent Sets in Bounded-Degree Hypergraphs
M. M. Halldórsson and E. Losievskaya*

Session 11B [15:40–17:00]

Enumeration of Matroids by Reverse Search and Its Applications
Y. Matsumoto, S. Moriyama and H. Imai*

Determining the non-realizability of oriented matroids by semidefinite programming
H. Miyata, S. Moriyama and H. Imai*

Solvable Trees
S. V. Gervacio, L. A. Ruivivar and Y. F. Lim*

Polytopes and Arrangements: Diameter and Curvature
A. Deza, T. Terlaky and Y. Zinchenko*

Session 11C [15:40–17:00]

A Novel Natural Approach to Euclidean TSP
N. A. Abu, S. Sahib and N. Suryana*

Bartholdi Zeta Functions of Branched Coverings of Digraphs
*H. Mizuno and I. Sato**

Balanced C_5 -Bowtie Decomposition of Complete Multi-Graphs
K. Ushio

Linear time algorithm for computing crossing number
K. Kawarabayashi and B. Reed*