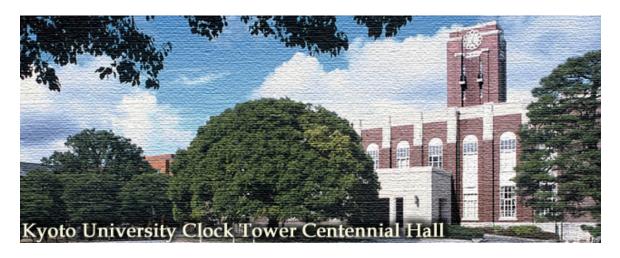
Computational Geometry Week 2014

The 30th Annual Symposium on Computational Geometry (SoCG 2014)

June 8 (Sun) - 11(Wed), 2014 Kyoto, Japan

CONFERENCE VENUE



The conference will take place at Centennial Memorial Hall, Clock Tower Centennial Hall, Kyoto University, Kyoto, Japan.

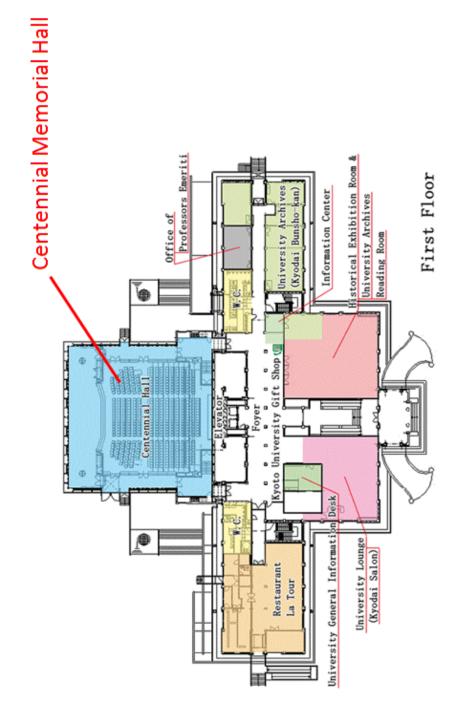
The most recognizable structure of the Kyoto University campus, the Clock Tower was designed by Goichi Takeda, the university's first Professor of Architecture, and completed in 1925. With attention given to Secession-style design in all of its facets, the sonorous feel of the exterior makes for a building of immense historical significance.

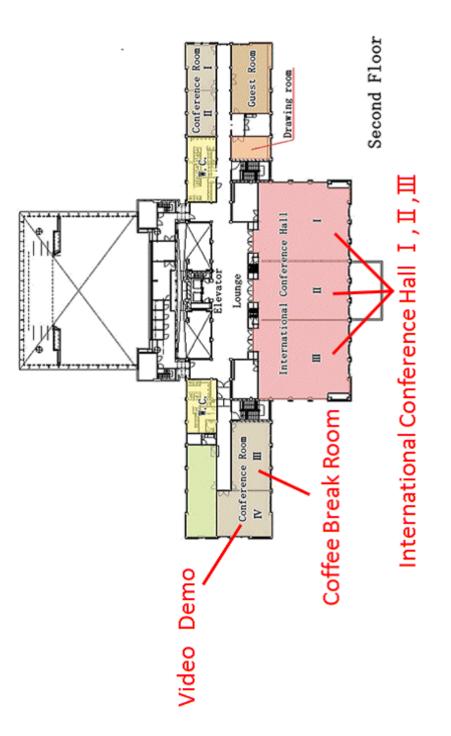
Using the most advanced technology of the time, the Clock Tower was one of the first university structures to be built with reinforced concrete. The interior of the hall itself was assembled using angle-plates, rivets and steel trusses. In the eight decades since it was opened, the Clock Tower has come to symbolize Kyoto University, having served variously as the lecture hall for the Faculties of Law and Economics, as well as, in more recent times, the Administration Bureau.



Kyoto University Main Campus Map

Conference Venue Map





J une 8 (S unday), 2014

9:00-	Registration		
Room	Int. Conference Hall I	Int. Conference Hall II	Int. Conference HallIII
9:30-11:10	Session 1a	Session 1b	
11:10-11:30	Coffee Break		
11:30- 12:55	Sesson 2 Invited Talk : Henry Segerman Best Paper Award ★ Room : 1F Centennial Hall ★		
12:55-14:30	Lunch (On your own)		
14:30- 16:00	Geometric Structures with Symmetry and Periodicity	Geometric Optimization in Wireless Communication and Sensing	Video Sesson (14:30- 15:30) YRF Fast Forward (15:30- 16:00)
16:00-16:30	Coffee Break		
16:30- 18:00	Geometric Structures with Symmetry and Periodicity	Geometric Optimization in Wireless Communication and Sensing	Young Researchers Forum Session 1

June 9 (Monday), 2014

9:00-	Registration		
Room	Int. Conference Hall I	Int. Conference Hall II	Int. Conference Hall III
9:15- 10:55	Session 3a	Session 3b	Session 3c
10:55-11:15	Coffee Break		
11:15- 12:30	Session 4a	Session 4b	Session 4c
12:30-13:30	Lunch (On your own)		
13:30- 14:30	CG Week Plenary Talk : J in Akiyama ★ Room : 1F Centennial Hall ★		
14:30-15:00	Coffee Break		
15:00- 16:20	Geometric Structures with Symmetry and Periodicity	Extension Complexity: An Update and Future Directions	Young Researchers Forum Session 2 (15:00- 16:30)
16:20-16:40	Coffee Break		
16:40- 18:00	Geometric Structures with Symmetry and Periodicity	Extension Complexity: An Update and Future Directions	
18:45-21:00	Business Meeting ★ Room : Int. Conference Hall I , II ★		

J une 10 (Tuesday), 2014

9:00-	Registration		
Room	Int. Conference Hall I	Int. Conference Hall II	Int. Conference HallIII
9:15- 10:55	Session 5a	Session 5b	
10:55-11:15	Coffee Break		
11:15- 12:15	Sesson 6 Invited Talk : Marie- Paule Cani ★ Room : 1F Centennial Hall ★		
12:15-13:30	Lunch (On your own)		
13:30- 14:20	Session 7a	Session 7b	Session 7c
14:20-14:30	Coffee Break		
14:30- 16:10	Geometric Puzzles and Games	Triangulations in Geometry and Topology	
16:10-16:30	Coffee Break		
16:30- 18:00	Geometric Puzzles and Games	Triangulations in Geometry and Topology	
19:00- 21:00	Banquet ★ Place : Kyoto Royal Hotel & SPA ★		

June 11 (Wednesday), 2014

9:00-	Registration		
Room	Int. Conference Hall I	Int. Conference Hall II	
9:15- 10:55	Session 8a	Session 8b	
10:55-11:15	Coffee Break		
11:15- 12:55	Session 9a	Session 9b	
12:55-14:30	Lunch (On your own)		
14:30- 16:10	Workshop in Honor of 65th Birthday of Tetsuo Asano: Growing Collaboration in Computational Geometry		
16:10-16:30	Coffee Break		
16:30- 18:35	Workshop in Honor of 65th Birthday of Tetsuo Asano: Growing Collaboration in Computational Geometry		

SUNDAY 9:30 - 11:10

Session 1a

Room : International Conference Hall I Chair : Joe Mitchell

[9:30-9:55]
Counting and Enumerating Crossing-free Geometric Graphs
Manuel Wettstein
[9:55-10:20]
Light Spanners for Snowflake Metrics
Lee-Ad Gottlieb and Shay Solomon
[10:20-10:45]
There are Plane Spanners of Maximum Degree 4
Nicolas Bonichon, Iyad Kanj, Ljubomir Perković, and Ge Xia
[10:45-11:10]
New and Improved Spanning Ratios for Yao Graphs
Luis Barba, Prosenjit Bose, Mirela Damian, Rolf Fagerberg, Wah Loon Keng, Joseph O'Rourke, André van Renssen, Perouz Taslakian, Sander Verdonschot, and Ge Xia

Session 1b

Room : International Conference Hall II Chair : David Avis

[9:30-9:55]

On Constant Factors in Comparison-Based Geometric Algorithms and Data Structures Timothy M. Chan and Patrick Lee [9:55-10:20] Progressive Geometric Algorithms Sander Alewijnse, Timur Bagautdinov, Mark De Berg, Quirijn Bouts, Alex Ten Brink, Kevin Buchin, and Michel Westenberg [10:20-10:45] On the Impossibility of Dimension Reduction for Doubling Subsets of ℓ_p Yair Bartal, Lee-Ad Gottlieb, and Ofer Neiman [10:45-11:10] The Limited Blessing of Low Dimensionality: when 1 - 1/d is the Best Possible Exponent for *d*-dimensional Geometric Problems Dániel Marx and Anastasios Sidiropoulos

SUNDAY 11:30 - 12:55

Session 2

Room : Centennial Hall Chair : Siu-Wing Cheng

Invited Talk

[11:30-12:30] Design of 3D printed mathematical art Henry Segerman

Best Paper Award

[12:30-12:55] Embeddability in the 3-sphere is Decidable Jiří Matoušek, Eric Sedgwick, Martin Tancer, and Uli Wagner

SUNDAY 14:30 - 16:00

Geometric Structures with Symmetry and Periodicity

Room : International Conference Hall I

[14:30-14:35] **Welcome**

[14:35-14:55]
Embeddings of the square flat torus and smooth fractals
Boris Thibert
[14:55-15:20]
Voronoi diagrams and Bolza surface
Monique Teillaud
[15:20-16:00]
Exact computation with hyperbolic 3-manifolds
Benjamin Burton

Geometric Optimization in Wireless Communication and Sensing Room : International Conference Hall II

[14:30?15:10]
Shortest Paths in Intersection Graphs of Unit Disks
Sergio Cabello
[15:15?15:55]
Barriers in Networks: The Good, the Bad and the Ugly
Valentin Polishchuk

Video Session

Room : International Conference Hall III

[14:30-15:30]

The Connect-The-Dots Family of Puzzles: The Video Mira Kaiser, Tim van Kapel, Gerwin Klappe, Marc van Kreveld, Maarten Löffler, and Frank Staals LiveCG: an Interactive Visualization Environment for Computational Geometry Sebastian Kürten and Wolfgang Mulzer **Trajectory Grouping Structure: the Video** Kevin Buchin, Maike Buchin, Marc van Kreveld, Bettina Speckmann, and Frank Staals Visualizing Hyperbolic Voronoi Diagrams Frank Nielsen and Richard Nock Animation of an Algorithm for Drawing Graphs in 3D Lezar DeGuzman and Stephen Wismath Visualization of Floater and Gotsman's Morphing Algorithm Ivaylo Ilinkin Geometric *k*th Shortest Paths: the Applet John Hershberger, Valentin Polishchuk, Bettina Speckmann, and Topi Talvitie Polytope Offsets and Straight Skeletons in 3D Franz Aurenhammer and Gernot Walzl

YRF Fast Forward

Room : International Conference Hall III

[15:30-16:00] **Quickly Placing a Point to Maximize Angles** Boris Aronov and Mark Yagnatinsky Linear Space Adaptive Data Structure for Planar Range Reporting Ananda Swarup Das and Prosenjit Gupta **Steiner Point Reduction in Planar Delaunay Meshes** Ahmed Abdelkader, Scott A. Mitchell, and Mohamed S. Ebeida Constraint-based surface mapping via hyperbolic orbifold metrics Alex Tsui Effcient and Robust Persistent Homology for Measures Mickaël Buchet, Frédéric Chazal, Steve Y. Oudotl, and Donald R. Sheehy Handling column accumulation in persistent homology computations Hubert Wagner **Inverse-Beacon Guarding** Michael Biro Hierarchical distance-based aggregation Mukulika Ghosh and Nancy M. Amato **Flipping Edge-Labelled Triangulations** Prosenjit Bose Anna, Lubiw, Vinayak Pathak, and Sander Verdonschot Crossing numbers and characterizations of monotone drawings of K_n Martin Balko, Radoslav Fulek, and Jan Kynčl **Detecting Weakly Simple Polygons** Hsien-Chih Chang, Jeff Erickson, and Chao Xu

Unfolding k-Monotone Linear Trees

Ching-Hao Liu and Sheung-Hung Poon

SUNDAY 16:30 - 18:00

Geometric Structures with Symmetry and Periodicity

Room : International Conference Hall I

[16:30-17:10]
Coordinated motions of repetitive structures from a mechanical point of view
Hiro Tanaka
[17:10-17:30]
Crossing-free straight-line drawing of graphs on the flat torus
Luca Castelli Aleardi, Olivier Devillers, and Éric Fusy
[17:30-17:50]
The Betweenness Centrality on 1-Dimensional Periodic Graphs
Norie Fu and Vorapong Suppakitpaisarn

Geometric Optimization in Wireless Communication and Sensing Room : International Conference Hall II

[16:30?17:10] Cooperative Navigation for Robot Swarms Sándor Fekete [17:15?18:00] Discussion and open problem session The Organizers

Young Researchers Forum Session 1

Room : International Conference Hall III

[16:30-16:45] **Quickly Placing a Point to Maximize Angles** Boris Aronov and Mark Yagnatinsky [16:45-17:00] Linear Space Adaptive Data Structure for Planar Range Reporting Ananda Swarup Das and Prosenjit Gupta [17:00-17:15] **Steiner Point Reduction in Planar Delaunay Meshes** Ahmed Abdelkader, Scott A. Mitchell, and Mohamed S. Ebeida [17:15-17:30] Constraint-based surface mapping via hyperbolic orbifold metrics Alex Tsui [17:30-17:45] Effcient and Robust Persistent Homology for Measures Mickaël Buchet, Frédéric Chazal, Steve Y. Oudotl, and Donald R. Sheehy [17:45-18:00] Handling column accumulation in persistent homology computations Hubert Wagner

MONDAY 9:15 - 10:55

Session 3a

Room : International Conference Hall I Chair : Jack Snoeyink

[9:15-9:40]
Optimal Geometric Flows via Dual Programs
Sylvester Eriksson-Bique, Valentin Polishchuk, and Mikko Sysikaski
[9:40-10:05]
Sub-linear Time Hybrid Approximations for Least Trimmed Squares Estimator
and Related Problems
Hu Ding and Jinhui Xu
[10:05-10:30]
Quasi-Polynomial Time Approximation Scheme for Sparse Subsets of Polygons
Sariel Har-Peled
[10:30-10:55]
A Near-optimal Approximation Algorithm for Asymmetric TSP on Embedded Graphs
Jeff Erickson and Anastasios Sidiropoulos

Session 3b

Room : International Conference Hall II Chair : Hiro Ito

[9:15-9:40]
Outerstring Graphs are χ-bounded
Alexandre Rok and Bartosz Walczak
[9:40-10:05]
Improved Bounds for the Conflict-free Chromatic Art Gallery Problem
Andreas Bärtschi, Subir Kumar Ghosh, Matúš Mihalák, Thomas Tschager, and Peter Widmayer
[10:05-10:30]
Linear Transformation Distance for Bichromatic Matchings
Oswin Aichholzer, Luis Barba, Thomas Hackl, Alexander Pilz, and Birgit Vogtenhuber
[10:30-10:55]
Delaunay Triangulations with Disconnected Realization Spaces
Arnau Padrol and Louis Theran

Session 3c

Room : International Conference Hall III Chair : Naoki Katoh

[9:15-9:40]

Eliminating Tverberg Points, I. An Analogue of the Whitney Trick Isaac Mabillard and Uli Wagner [9:40-10:05] Higher Dimensional Cheeger Inequalities Anna Gundert and May Szedlák
$$\label{eq:constraint} \begin{split} & [10:05\text{-}10:30] \\ & \text{Incidences between Points and Lines in \mathbb{R}^4} \\ & \text{Micha Sharir and Noam Solomon} \\ & [10:30\text{-}10:55] \\ & \text{On Triple Intersections of three Families of Unit Circles} \\ & \text{Orit E. Raz, Micha Sharir, and József Solymosi} \end{split}$$

MONDAY 11:15 - 12:30

Session 4a

Room : International Conference Hall I Chair : Uli Wagner

[11:15-11:40]
Finding the Largest Disk Containing a Query Point in Logarithmic Time with Linear Storage Tal Kaminker and Micha Sharir
[11:40-12:05]
Smallest Enclosing Ball for Probabilistic Data
Alexander Munteanu, Christian Sohler, and Dan Feldman
[12:05-12:30]
Peeling Potatoes Near-optimally in Near-linear Time
Sergio Cabello, Josef Cibulka, Jan Kynčl, Maria Saumell, and Pavel Valtr

Session 4b

Room : International Conference Hall II Chair : Yushi Uno

[11:15-11:40]
On the Complexity of Randomly Weighted Voronoi Diagrams
Sariel Har-Peled and Benjamin Raichel
[11:40-12:05]
A Census of Plane Graphs with Polyline Edges
Andrea Francke and Csaba Toth
[12:05-12:30]
Polynomials Vanishing on Grids: The Elekes-Rónyai Problem Revisited
Orit E. Raz, Micha Sharir, and József Solymosi

Session 4c

Room : International Conference Hall III Chair : Maartin Loeffler

[11:15-11:40]

Using Convex Relaxations for Efficiently and Privately Releasing Marginals Cynthia Dwork, Aleksandar Nikolov, and Kunal Talwar [11:40-12:05] Near-Linear Algorithms for Geometric Hitting Sets and Set Covers Pankaj K. Agarwal and Jiangwei Pan [12:05-12:30] Better Embeddings for Planar Earth-Mover Distance over Sparse Sets Artūrs Bačkurs and Piotr Indyk

MONDAY 13:30-14:30

CG Week Plenary Talk

[13:30-14:30] Decomposabilities and Reversibilities of P2-tiles Jin Akiyama

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Room : Centennial Hall

MONDAY 15:00 - 16:20

Geometric Structures with Symmetry and Periodicity

Room : International Conference Hall I

[15:00-15:40]
Auxetic periodic materials
Ciprian Borcea
[15:40-16:00]
Ultrarigid periodic frameworks
Louis Theran
[16:00-16:20]
Linking Rigid Bodies Symmetrically
Bernd Schulze and Shin-ichi Tanigawa

Extension Complexity: An Update and Future Directions

Room : International Conference Hall II

[15:00-15:05]
Opening
David Avis
[15:05-15:45]
Extended formulations: Introduction to lower bounding techniques
Hans Tiwary
[15:45-16:25]
Extended formulations: Lower bounds and matching polytope
Kanstantsin Pashkovich

Young Researchers Forum Session 2

Room : International Conference Hall III

[15:00-15:15]
Inverse-Beacon Guarding
Michael Biro
[15:15-15:30]
Hierarchical distance-based aggregation
Mukulika Ghosh and Nancy M. Amato
[15:30-15:45]
Flipping Edge-Labelled Triangulations
Prosenjit Bose Anna, Lubiw, Vinayak Pathak, and Sander Verdonschot
[15:45-16:00]
Crossing numbers and characterizations of monotone drawings of K_n
Martin Balko, Radoslav Fulek, and Jan Kynčl

[16:00-16:15]
Detecting Weakly Simple Polygons
Hsien-Chih Chang, Jeff Erickson, and Chao Xu
[16:15-16:30]
Unfolding *k*-Monotone Linear Trees
Ching-Hao Liu and Sheung-Hung Poon

MONDAY 16:40 - 18:00

Geometric Structures with Symmetry and Periodicity

Room : International Conference Hall I

[16:40-17:20]
Dynamics of protein molecules in crystals: "Please hold still so we can take your picture"
George Phillips
[17:20-17:40]
Approximate Symmetries of Point Patterns
Helmut Alt for Claudia Dieckmann
[17:40-18:00]
Symmetry-aware placement of hydrogens in molecules: Reduce and cctbx
Jack Snoeyink, Auston Sterling, and Vishal Verma

Extension Complexity: An Update and Future Directions

Room : International Conference Hall II

[16:45-17:25]
Extended formulations for sparsity matroids
Yoshio Okamoto
[17:25-17:55]
Polynomial size matching polytopes
David Avis
[17:55-18:00]
Closing
Naoki Katoh

TUESDAY 9:15 - 10:55

Session 5a

Room : International Conference Hall I Chair : Sheung-Hung Poon

[9:15-9:40]

Higher-Quality Tetrahedral Mesh Generation for Domains with Small Angles by Constrained Delaunay Refinement
Jonathan Shewchuk and Hang Si
[9:40-10:05]
On the Reconstruction of Convex Sets from Random Normal Measurements
Hiba Abdallah and Quentin Mérigot
[10:05-10:30]
Intersection of Paraboloids and Application to Minkowski-Type Problems
Pedro Machado Manhães de Castro, Quentin Mérigot, and Boris Thibert
[10:30-10:55]
Efficient Random-Walk Methods for Approximating Polytope Volume
Ioannis Emiris and Vissarion Fisikopoulos

Session 5b

Room : International Conference Hall II Chair : Yoshio Okamoto

[9:15-9:40]

The Persistent Homology of Distance Functions under Random Projection Don Sheehy [9:40-10:05] Discrete Systolic Inequalities and Decompositions of Triangulated Surfaces Éric Colin de Verdière, Alfredo Hubard, and Arnaud de Mesmay [10:05-10:30] Computing Topological Persistence for Simplicial Maps Tamal Dey, Fengtao Fan, and Yusu Wang [10:30-10:55] Induced Matchings of Barcodes and the Algebraic Stability of Persistence Ulrich Bauer and Michael Lesnick

TUESDAY 11:15 - 12:15

Session 6

Room : Centennial Hall Chair : Olivier Devillers

Invited Talk

[11:15-12:15] **Towards Expressive 3D Modelling: new challenges for geometric computing** Marie-Paule Cani

TUESDAY 13:30 - 14:20

Session 7a

Room : International Conference Hall I Chair : Matthew Katz

[13:30-13:55]
Computing the Fréchet Distance with Shortcuts is NP-hard
Maike Buchin, Anne Driemel, and Bettina Speckmann
[13:55-14:20]
The Discrete Fréchet Distance with Shortcuts via Approximate Distance Counting and Selection
Rinat Ben Avraham, Omrit Filtser, Haim Kaplan, Matthew Katz, and Micha Sharir

Session 7b

Room : International Conference Hall II Chair : Ileana Streinu

[13:30-13:55]
A Framework for Computing the Greedy Spanner
Quirijn Bouts, Alex Ten Brink, and Kevin Buchin
[13:55-14:20]
Continuously Flattening Polyhedra Using Straight Skeletons
Zachary Abel, Erik D. Demaine, Martin Demaine, Jin-Ichi Itoh, Anna Lubiw, Chie Nara, and Joseph O'Rourke

Session 7c

Room : International Conference Hall III Chair : Shinichi Tanigawa

[13:30-13:55]
Two-Point L₁ Shortest Path Queries in the Plane
Danny Z. Chen, Rajasekhar Inkulu, and Haitao Wang
[13:55-14:20]
Better ε-Dependencies for Offline Approximate Nearest Neighbor Search,
Euclidean Minimum Spanning Trees, and ε-Kernels
Sunil Arya and Timothy M. Chan

TUESDAY 14:30 - 16:10

Geometric Puzzles and Games

Room : International Conference Hall I

[14:30-14:35] **Opening** Hiro Ito [14:35-15:05] **Recent Results in Recreational Computer Science** Erik D. Demaine [15:05-15:35] **Things that Roll, Pull and Glide** Kevin Buchin [15:35-16:05] **From Japanese Old Math** Jin Akiyama

Triangulations in Geometry and Topology

Room : International Conference Hall II

[14:30-15:10]
Using Normal Surfaces to Decide Embeddability
Eric Sedgwick
[15:20-16:00]
Courcelle's theorem for triangulations
Benjamin A. Burton

TUESDAY 16:30 - 18:00

Geometric Puzzles and Games

Room : International Conference Hall I

[16:25-16:55]
Puzzles in Wood, Puzzles on Paper, and Puzzles in Bytes
Marc van Kreveld
[16:55-17:25]
Placing Polyominoes on the Grid
Matias Korman
[17:25-17:55]
Packing Pie
Mike Paterson
[17:55-18:00]
Closing
Stefan Langerman

Triangulations in Geometry and Topology

Room : International Conference Hall II

[16:30-17:10]
Structure on the set of triangulations
Henry Segerman
[17:20-18:00]
Stacked triangulations of polytopes and manifolds
Satoshi Murai

WEDNESDAY 9:15 - 10:55

Session 8a

Room : International Conference Hall I Chair : David Mount

[9:15-9:40]

Free Edge Lengths in Plane Graphs

Zachary Abel, Robert Connelly, Sarah Eisenstat, Radoslav Fulek, Filip Morić, Yoshio Okamoto, Tibor Szabó, and Csaba Tóth [9:40-10:05] **Weight Balancing on Boundaries and Skeletons** Luis Barba, Jean Lou De Carufel, Otfried Cheong, Michael Dobbins, Rudolf Fleischer, Akitoshi Kawamura, Matias Korman, Yoshio Okamoto, János Pach, Yuan Tang, Takeshi Tokuyama, Sander Verdonschot, and Tianhao Wang [10:05-10:30]

Separation by Convex Pseudo-Circles

Nicolas Chevallier, Augustin Fruchard, Dominique Schmitt, and Jean-Claude Spehner [10:30-10:55]

Euclidean Steiner Shallow-Light Trees

Shay Solomon

Session 8b

Room : International Conference Hall II Chair : Benjamin Burton

[9:15-9:40]

Measuring Distance between Reeb Graphs

Ulrich Bauer, Xiaoyin Ge, and Yusu Wang

[9:40-10:05]

Stochastic Convergence of Persistence Landscapes and Silhouettes

Frédéric Chazal, Brittany Terese Fasy, Fabrizio Lecci, Alessandro Rinaldo, and Larry Wasserman [10:05-10:30]

The Morse Theory of Čech and Delaunay Filtrations

Ulrich Bauer and Herbert Edelsbrunner

[10:30-10:55]

Gromov-Hausdorff Approximation of Filament Structure Using Reeb-type Graph

Frédéric Chazal and Jian Sun

WEDNESDAY 11:15 - 12:55

Session 9a

Room : International Conference Hall I Chair : Monique Teillaud

[11:15-11:40]
Metric Embedding, Hyperbolic Space, and Social Networks
Kevin Verbeek and Subhash Suri
[11:40-12:05]
Sampling with Removal in LP-type Problems
Bernd Gärtner
[12:05-12:30]
Liftings and Stresses for Planar Periodic Frameworks
Ciprian Borcea and Ileana Streinu
[12:30-12:55]
The Opaque Square
Adrian Dumitrescu and Minghui Jiang

Session 9b

Room : International Conference Hall II Chair : Otfried Cheong

[11:15-11:40] Merge Graphs of Join and Split Trees Suyi Wang, Yusu Wang, and Rephael Wenger [11:40-12:05] Distinct Distances on Algebraic Curves in the Plane János Pach and Frank de Zeeuw [12:05-12:30] Lower Bounds on Geometric Ramsey Functions Marek Eliáš, Jiří Matoušek, Edgardo Roldán-Pensado, and Zuzana Safernová [12:30-12:55] Curves in \mathbb{R}^d Intersecting every Hyperplane at most d + 1 Times Imre Bárány, Jiří Matoušek, and Attila Pór

WEDNESDAY 14:30-16:10

Workshop in Honor of 65th Birthday of Tetsuo Asano: Growing Collaboration in Computational Geometry

Room : International Conference Hall I

[14:30-14:50]
Opening
A Mathematical Expedition into Zone Diagrams
Takeshi Tokuyama
[14:50-15:30]
Efficient algorithms with small workspace: shortest paths in grid graphs revisited
David Kirkpatrick
[15:30-16:10]
Geometric kth Shortest Paths: Life and Death in the Parking Garage
John Hershberger

WEDNESDAY 16:30-18:35

Workshop in Honor of 65th Birthday of Tetsuo Asano: Growing Collaboration in Computational Geometry

Room : International Conference Hall I

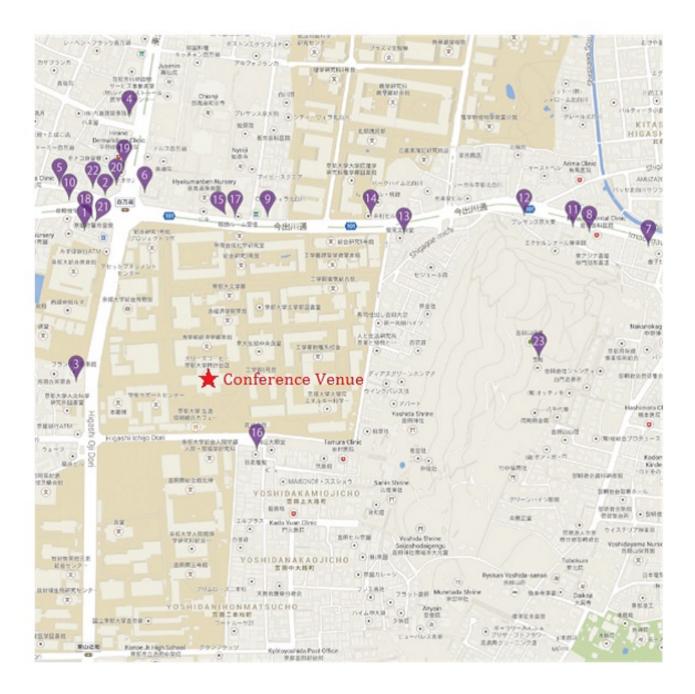
[16:30-17:10]
New Imaging Algorithms in Computational Geometry with Applications
Danny Z. Chen
[17:10-17:50]
In how many ways can you stab four congruent balls?
Otfried Cheong
[18:00-18:30]
Designing Algorithms with Limited Work Space
Tetsuo Asano
[18:30-18:35]
Closing

Lunch Map : Kyoto University Cafeteria Map



- La Tour ラ・トゥール French Restaurant
 11:00-15:00,17:00-22:00, less than 2000 yen (for lunch), 8000 yen (for dinner)
- 2. Tully's Coffee タリーズコーヒー (B1F) Cafe 9:00-19:00 Monday through Friday, 9:00-18:00 Saturday, 10:00-18:00 Sunday
- Central Cafeteria 中央食堂 School Cafeteria
 8:00-21:00 Closed on Saturday & Sunday, less than 500 yen
- 4. Camphora カンフォーラ Cafe Restaurant
 8:00 22:00 Monday through Friday, 11:00-15:00 Saturday & Sunday less than 1000 yen (for lunch), less than 2000 yen (for dinner)
- 5. Cafeteria Renais ルネ School Cafeteria 11:00-22:00 Monday through Friday, 11:00-19:30 Saturday, 11:00-14:00 Sunday, less than 500 yen

Lunch Map : Near Kyoto University



- 1. Madoi まどい Western 11:30-14:30, 17:00-21:30 Closed on Sunday, appr. 1000 yen (for lunch)
- 2. Koanosuke こあの助 (2F) Thai curry 11:30-15:00, 17:30-22:30, less than 1000 yen
- 3. Le cafe ル・カフェ French cafe Closed on Monday, 1500 yen for lunch
- 4. James Kitchen ジェイムスキッチン Hamburger steak, 11:30-23:00 Open everyday, less than 1000 yen
- 5. Aozora アオゾラ Thai curry 12:00-15:00, 17:30-21:00, Close on Thursday, less than 1000 yen
- 6. Nishiki warai 錦わらい Japanese pancake お好み焼き 11:30-15:00, 17:00-1:00 Open everyday, less than 1000 yen
- 7. Second House セカンドハウス Cafe & light meals, 11:30-23:00 Open everyday, less than 1000 yen
- 8. Cafe voir clair カフェボアクレール Cafe & light meals, 11:00-20:00 Open everyday, less than 1000 yen
- Shinshindou 進々堂 Cafe & light meals
 8:00-17:45 Closed on Tuesday, less than 1000 yen
- 10. Boogaloocafe ブーガルーカフェ Cafe & pasta, 12:00-23:00 Open everyday, appr. 1000 yen
- Goya ゴーヤ Okinawa & Asian
 12:00-16:00, 18:00-23:00, Closed on Wednesday, less than 1000 yen (for lunch)
- 12. Matsuo まつお Japanese noodle(sara-udon) 11:30-14:30, 17:00-21:00 Closed on Friday, less than 1000 yen
- 13. Ryumon 龍門 Chinese (Sichuan) 四川料理 11:00-14:00, 17:00-23:30, Open everyday, less than 1000 yen
- 14. Tosca トスカ Vegetarian 11:30-22:00 Closed on Sunday & Monday, less than 1500 yen (for lunch)
- 15. Raju ラジュ Indian 11:00-15:00, 17:00-23:00 Open everyday, less than 1500 yen
- 16. Kafu かふう Tempula 11:30-14:00, 17:00-21:00, Closed on Sunday & Monday, less than 1500 yen (for lunch) less than 8000 yen (for dinner)
- 17. Sujata スジャータ Vegetarian 12:00-15:00, 17:00-21:00, Closed on Saturday &Sunday, less than 1000 yen
- 18. Matuya まつや Beef ball Open everyday, less than 500 yen

- 19. Sukiya すきや Beef ball Open everyday, less than 500 yen
- 20. Ousho 王将 Japanese style Chinese Open everyday, less than1000 yen
- 21. Subway (sandwich) Open everyday, less than 600 yen
- 22. Omuraya おむら家 Japanese pub 居酒屋 17:00-23:30 Open everyday, 3000~4000 yen
- 23. Moan 茂庵 (on the top of the hill) Cafe & light meals, 11:30-17:00 Closed on Monday, less than 1000 yen

Banquet place: Kyoto Royal Hotel & SPA



★ Acess

- From Conference Venu :
 - Free Shuttle Bus (Provide by SoCG2014, Tuseday 18:15)
 - Approximately 10 minutes by Taxi (appr. 1,200 Yen)
- From Kyoto Shiyakushomae Subway Station:
 Approximately 1 minute on foot.
- From JR and Kintetsu Kyoto Station:
 Approximately 15-20 minutes by Taxi.
- From Keihan Sanjo Station:
 Approximately 5 minutes on foot.
- From Hankyu Kawaramachi Station: - Approximately 10 minutes on foot.



Travel to the conferece venue (from Kyoto Station)

by Taxi
by Bus

by Bus Take Kyoto City Bus Line #206 or #17 at Kyoto station bus terminal. It takes approx. 30 minutes. Flat rate fares (230 yen) will be charged.

• City Bus All-day Pass

Adult: ¥ 500 / Child: ¥ 250 Can be used within the allocated zone of the city. Valid within the allocated zone. Unlimited use on the same day. When traveling outside of the allocated zone, it is necessary to pay the extra amount. Card for Taxi Drivers

Please go to Kyoto University Clock Tower Centennial Hall. 京都大学百周年時計台記念館まで お願いします。

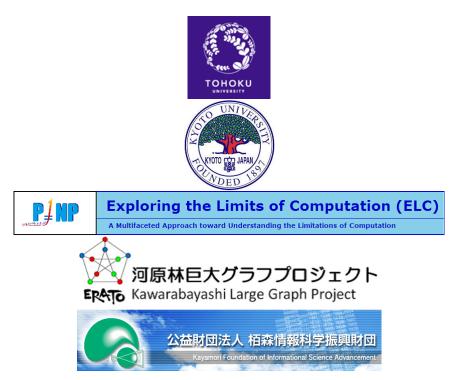
Please go to Kyoto Royal Hotel & SPA. 京都ロイヤルホテル&スパまで お願いします。

Please go to JR Kyoto station.

JR 京都駅までお願いします。

Sponsors and supports

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