

# EGC 2013 PROGRAM



## Wednesday June 26, 2013

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**08:00-09:00** Conference registration

**09:00-09:30** Welcome and opening speech

**09:30-10:30** Invited talk (Chairman: Ferran Hurtado)  
Art gallery problems, old and recent. Jorge Urrutia

**10:30-11:30** Session 1 (Chairman: Gelasio Salazar)

10:30-10:50 Continuous surveillance of points by rotating floodlights. Sergey Bereg, José-Miguel Díaz-Báñez, Marta Fort, Mario A. López, Pablo Pérez-Lantero, and Jorge Urrutia.

10:50-11:10 Some results on open edge guarding of polygons. Antonio L. Bajuelos, Santiago Canales, Gregorio Hernández, Mafalda Martins, and Inês Matos.

11:10-11:30 Guarding the vertices of thin orthogonal polygons is NP-hard. Ana Paula Tomás.

**11:30-12:00** Coffee break

**12:00-13:20** Session 2 (Chairman: Clemens Huemer)

12:00-12:20 Solving common influence region queries with the GPU. Marta Fort and J. Antoni Sellarès.

12:20-12:40 Reporting flock patterns on the GPU. Marta Fort, J. Antoni Sellarès, and Nacho Valladares.

12:40-13:00 Parallel constrained Delaunay triangulation. Narcís Coll and Marité Guerrieri.

13:00-13:20 Metaheuristic approaches for the Minimum Dilation Triangulation problem. María Gisela Dorzán, Mario Guillermo Leguizamón, Efrén Mezura-Montes, and Gregorio Hernández.

**13:30-15:30** Lunch

**15:30-16:30** Invited talk (Chairman: Juan A. Mesa)  
Three location tapas calling for CG sauce. Frank Plastria

**16:30-17:00** Coffee break

**17:00-18:40** Session 3 (Chairman: J. Antoni Sellarès)

17:00-17:20 On the barrier-resilience of arrangements of ray-sensors. David Kirkpatrick, Boting Yang, and Sandra Zilles.

17:20-17:40 Computing the stretch of an embedded graph. Sergio Cabello, Markus Chimani, and Petr Hliněný.

17:40-18:00 An algorithm that constructs irreducible triangulations of once-punctured surfaces. M. José Chávez, Serge Lawrencenko, José R. Portillo, and M. Trinidad Villar.

18:00-18:20 On the enumeration of permutominoes. Ana Paula Tomás.

18:20-18:40 Distance domination, guarding and vertex cover for maximal outerplanar graphs. Santiago Canales, Gregorio Hernández, Mafalda Martins, and Inês Matos.

## Thursday June 27, 2013

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**09:00-10:00** Invited talk (Chairman: Sergio Cabello)  
Abstract Voronoi Diagrams. Rolf Klein

**10:00-11:00** Session 4 (Chairman: Birgit Vogtenhuber)

10:00-10:20 Equipartitioning triangles. Pedro Ramos and William Steiger.

10:20-10:40 On the nonexistence of k-reptile simplices in  $\mathbb{R}^3$  and  $\mathbb{R}^4$ . Jan Kynčl and Zuzana Safernova.

10:40-11:00 Drawing the double circle on a grid of minimum size. Sergey Bereg, Ruy Fabila-Monroy, David Flores-Peñaloza, Mario A. López, and Pablo Pérez-Lantero.

**11:00-11:30** Coffee break

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**11:30-13:00 Session 5** (Chairman: Carlos Seara)

**11:30-11:50 SensoGraph: Using proximity graphs for sensory analysis.** David N. de Miguel, David Orden, Encarnación Fernández-Fernández, José M. Rodríguez-Nogales and Josefina Vila-Crespo.

**11:50-12:10 Simulated Annealing applied to the MWPT problem.** Edilma Olinda Gagliardi, Mario Guillermo Leguizamón, and Gregorio Hernández.

**12:10-12:30 A symbolic-numeric dynamic geometry environment for the computation of equidistant curves.** Miguel A. Abánades and Francisco Botana.

**12:30-12:50 Simulating distributed algorithms for lattice agents.** Oswin Aichholzer, Thomas Hackl, Vera Sacristan, Birgit Vogtenhuber, and Reinhard Wallner.

**13:00-15:00 Lunch**

**15:00-16:20 Session 6** (Chairman: Vera Sacristan)

**15:00-15:20 Empty convex polytopes in random point sets.** József Balogh, Hernán González-Aguilar, and Gelasio Salazar.

**15:20-15:40 Note on the number of obtuse angles in point sets.** Ruy Fabila-Monroy, Clemens Huemer, and Eulàlia Tramuns.

**15:40-16:00 Stabbing simplices of point sets with k-flats.** Javier Cano, Ferran Hurtado, and Jorge Urrutia.

**16:00-16:20 Stackable tessellations.** Lluís Enriqué and Rafel Jaume.

**16:30-17:30 Business meeting**

**20:30-21:30 Flamenco Concert at the Restaurant "Los Seises"**

**21:30 Conference Dinner at the Restaurant "Los Seises"**

**Friday June 28, 2013**

**09:30-11:10 Session 7** (Chairman: William Steiger)

**09:30-09:50 Improved enumeration of simple topological graphs.** Jan Kynčl.

**09:50-10:10 On three parameters of invisibility graphs.** Josef Cibulka, Miroslav Korbelář, Jan Kynčl, Viola Mészáros, Rudolf Stolař, and Pavel Valtr.

**10:10-10:30 On making a graph crossing-critical.** César Hernández Vélez and Jesús Leños.

**10:30-10:50 Witness bar visibility.** Carmen Cortés, Ferran Hurtado, Alberto Márquez, and Jesús Valenzuela.

**10:50-11:10 The alternating path problem revisited.** Mercè Claverol, Delia Garijo, Ferran Hurtado, Dolores Lara and Carlos Seara.

**11:10-11:40 Coffee break**

**11:40-13:00 Session 8** (Chairman: Gregorio Hernández)

**11:40-12:00 Phase transitions in the Ramsey-Turan theory.** József Balogh.

**12:00-12:20 On 4-connected geometric graphs.** Alfredo García, Clemens Huemer, Javier Tejel, and Pavel Valtr.

**12:20-12:40 Monotone crossing number of complete graphs.** Martin Balko, Radoslav Fulek, and Jan Kynčl.

**12:40-13:00 Flips in combinatorial pointed pseudo-triangulations with face degree at most four.** Oswin Aichholzer, Thomas Hackl, David Orden, Alexander Pilz, María Saumell, and Birgit Vogtenhuber.

**13:00-13:15 Break**

**13:15-14:15 Invited talk** (Chairman: David Orden)

**Recent developments in the crossing number of the complete graph.** Pedro Ramos

**14:30 Lunch**