



PROGRAM EGC 2019

SUNDAY, JUNE 30

19:30 RECEPTION

MONDAY, JULY 1

8:30 REGISTRATION

9:15 OPENING CEREMONY

Invited Talk: Marc van Kreveld

10:00 **Geometric Definitions for Geographic Problems: groups of moving entities and other phenomena**
Chair: Rodrigo Silveira

11:00 COFFEE BREAK

11:30 **Maximum matching in disk graphs of bounded depth** Sergio Cabello and Wolfgang Mulzer

11:50 **Generalized kernels of polygons under rotation: area and perimeter** Alejandra Martínez-Moraian, David Orden, Leonidas Palios, Carlos Seara and Paweł Żyliński

12:10 **Affine invariant triangulations** Prosenjit Bose, Pilar Cano and Rodrigo Silveira

12:30 SHORT BREAK

12:40 **Parallel Simulated Annealing for coverage area maximization** Narcis Coll, Marta Fort and Moisès Saus

13:00 **Collision avoidance for aerial vehicles using turn-angles** Luis Evaristo Caraballo, José-Miguel Díaz-Báñez, Ruy Fabila-Monroy, Alberto Fernández and Fabio Rodríguez

13:20 LUNCH

15:00 **The convex dimension of k-uniform hypergraphs** Leonardo Martínez-Sandoval and Arnau Padrol

15:20 **Geometric optimization problems for divisions of convex bodies** Antonio Cañete, Isabel Fernández and Alberto Márquez

15:40 **A complete list of all convex shapes made by gluing regular pentagons** Elena Arseneva, Stefan Langerman and Boris Zolotov

16:00 COFFEE BREAK

16:20 **Extending to 1-Plane Drawings** Fabian Klute, Irene Parada and Thekla Hamm

16:40 **Bounding the number of crossings for a particular class of drawings of $K_{n,n}$** Carolina Medina, Irene Parada, Gelasio Salazar and Birgit Vogtenhuber

17:00 BUSSINESS MEETING

19:30 GIRONA OLD QUARTER TOUR



Universitat de Girona
**Departament d'Informàtica,
Matemàtica Aplicada i Estadística**



TUESDAY, JULY 2

Invited Talk: David Rappaport

9:30

Old Problems New Results

Chair: Carlos Seara

10:30

COFFEE BREAK

11:00

Hamiltonian meander paths and cycles on bichromatic point sets

Oswin Aichholzer, Carlos Alegría, Irene Parada, Alexander Pilz, Javier Tejel, Csaba D. Tóth, Jorge Urrutia and Birgit Vogtenhuber

11:20

Matching random colored points with rectangles

Josue Corujo, David Flores, Clemens Huemer, Pablo Pérez-Lantero and Carlos Seara

11:40

Perfect rainbow polygons for colored point sets in the plane

David Flores-Peñaloza, Mikio Kano, Leonardo Martínez-Sandoval, David Orden, Javier Tejel, Csaba D. Tóth, Jorge Urrutia and Birgit Vogtenhuber

12:00

SHORT BREAK

12:10

Detecting inclusions for O-convex hulls of bichromatic point sets

Carlos Alegría, David Orden, Carlos Seara and Jorge Urrutia

12:30

On circles enclosing many points

Mercè Claverol, Clemens Huemer and Alejandra Martínez-Moraian

12:50

On the Triangle Vector

Oswin Aichholzer, Ruy Fabila-Monroy and Julia Obmann

13:10

LUNCH

14:30

A random polytope approach for classifying hollow polytopes

Oscar Iglesias-Valiño

14:50

Interpolating shapes with singularities using toric orbifolds

Ander Elkoroaristizabal Peleteiro and Julian Pfeifle

15:10

Erhart positivity of orbit polytopes

Filip Cano Córdoba and Julian Pfeifle

15:30

COFFEE BREAK

15:50

Total domination of near-triangulations

Javier Tejel, Mercè Claverol, Alfredo García, Gregorio Hernández, Carmen Hernando, Montserrat Maureso and Mercè Mora

16:10

Can one shape the color of a graph?

María Á. Garrido-Vizueté, Alberto Márquez and Rafael Robles

18:30

SOCIAL DINNER

WEDNESDAY, JULY 3

Invited Talk: Carme Torras

10:00

Research Challenges in Cloth Manipulation by Robots

Chair: Vera Sacristán

11:00

COFFEE BREAK

11:30

Reconfiguring edge-connected pivoting modular robots

Hugo A. A. Akitaya, Esther M. Arkin, Mirela Damian, Erik D. Demaine, Vida Dujmovic, Robin Flatland, Belen Palop, Irene Parada, André van Renssen and Vera Sacristán

11:50

Optimal coordinated motions for two squares

Dan Halperin, Victor Ruiz, Vera Sacristan and Rodrigo Silveira

12:10

Route graph construction from GPS trajectory data

Anton Bardera, Marta Fort and Yuejun Guo

12:30

SHORT BREAK

12:40

Real-time accurate and robust Simultaneous Localization and Mapping

Francisco Javier Delgado del Hoyo, Javier Finat Codes and Belén Palop

13:00

Using spectrum graph coloring in air traffic management

Alejandra Martínez-Moraian, David Orden, Jose Manuel Gimenez-Guzman and Iván Marsa Maestre

13:20

LUNCH