



# Program

## XVI Spanish Meeting on Computational Geometry

Tuesday, June 30

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19:00-21:00 Reception at the venue (inner courtyard).

Wednesday, July 1

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8:30- 9:15 Registration

9:15- 9:30 Welcome

9:30-10:30 **Invited talk** *Envelope Magic towards Reversible Pairs of Figures* **Jin Akiyama**

10:30-11:00 Coffee break

11:00-11:20 *Non-crossing monotone paths and binary trees in edge-labeled complete geometric graphs.* Frank Duque, Ruy Fabila-Monroy, Carlos Hidalgo-Toscano and Pablo Pérez-Lantero.

11:20-11:40 *On Hamiltonian alternating cycles and paths.* Mercè Claverol, Alfredo García, Delia Garijo, Carlos Seara and Javier Tejel.

11:40-12:00 *The bipartite traveling salesman problem for convex point sets.* Javier Tejel and Alfredo García.

12:00-12:20 *Crossing families and self crossing hamiltonian cycles.* Jorge Cravioto, Jose Luis Álvarez and Jorge Urrutia.

12:20-12:40 *Shortcut sets for Euclidean graphs.* José Cáceres, Delia Garijo, Antonio González, Alberto Márquez and M.L. Puertas.

12:40-14:30 Lunch

14:30-15:30 **Invited talk** *Enumerating lattice 3-polytopes.* **Francisco Santos**

15:30-16:00 Coffee break

16:00-16:20 *On the complexity of minimum-link path problems.* Irina Kostitsyna, Maarten Löffler, Valentin Polishchuk and Frank Staals.

16:20-16:40 *The O-hull of a planar point set and some applications.* Carlos Alegría-Galicia, David Orden, Carlos Seara and Jorge Urrutia.

16:40-17:00 *Matching regions in the plane using non-crossing segments.* Greg Aloupis, Esther Arkin, David Bremner, Erik D. Demaine, Sandor Fekete, Bahram Kouhestani and Joseph Mitchell.

17:00-17:30 Special session on open problems in memory of Ferran Hurtado.

19:00 *Special social event in memory of Ferran Hurtado*

Thursday, July 2

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9:00-10:00 **Invited talk** *Flows, Sets, and Stenos: Algorithmic Geo-visualization.* **Bettina Speckmann**

10:00-10:20 *Deciding monotonicity of good drawings of the complete graph.* Oswin Aichholzer, Thomas Hackl, Alexander Pilz, Gelasio Salazar and Birgit Vogtenhuber.

10:20-10:40 *Bounding the pseudolinear crossing number of  $K_n$  via simulated annealing.* Martin Balko and Jan Kynčl.

10:40-11:00 *Simple realizability of complete abstract topological graphs simplified.* Jan Kynčl.

11:00-11:30 Coffee break

11:30-11:50 *Remote monitoring by edges and faces of*

*maximal outerplane graphs.* Gregorio Hernández and Ana Mafalda Martins.

11:50-12:10 *A new meta-module for efficient robot reconfiguration.* Irene Parada, Vera Sacristán and Rodrigo I. Silveira.

12:10-12:30 *Efficient distributed and parallel reconfiguration of expand-contract modular robots.* Manuel Perera and Vera Sacristán.

12:30-12:50 *Computing the maximum overlap of a disk and a polygon with holes under translation.* Narcís Coll, Marta Fort and J. Antoni Sellarès.

12:50-14:40 Lunch

14:40-15:00 *The 2-center problem and ball operators in strictly convex normed planes.* Pedro Martín, Horst Martini and Margarita Spirova.

15:00-15:20 *Combining surface and volume Reeb graphs for solid segmentation.* Birgit Strodthoff and Bert Jüttler.

15:20-15:40 *Minimum interference graph coloring and monochromatic edges.* Javier Lorenzo Díaz, David Orden, Iván Marsá-Maestre, Jose Manuel Giménez-Guzmán and Enrique de La Hoz.

15:40-16:00 *Grundy and pseudo-Grundy indices for geometric graphs.* Dolores Lara, Christian Rubio-Montiel and Francisco Javier Zaragoza Martínez.

16:00-16:30 Coffee break

16:30-16:50 *Orthogonal polygon illumination with rotating floodlights.* Israel Aldana, David Flores, Jorge Urrutia, Carlos Velarde, Carmen Cedillo, Joel Aguilar and Erick Solis.

16:50-17:10 *Almost empty monochromatic polygons in planar point sets.* Alejandro C. González-Martínez, Jorge Cravioto Lagos and Jorge Urrutia.

17:10-17:30 *The hamburger theorem.* Jan Kynčl and Mikio Kano.

17:30-17:50 *On the number of anchored rectangle packings for a planar point set.* Kevin Balas and Csaba Tóth.

17:50-18:50 Business meeting

21:00 *Conference dinner* ★★★★★★★★★★

Friday, July 3

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9:30-10:30 **Invited talk** *Ray configurations.* **Jorge Urrutia**

10:30-11:00 Coffee break

11:00-11:20 *Stabbing segments with rectilinear objects.* Mercè Claverol, Delia Garijo, Matias Korman, Carlos Seara and Rodrigo I. Silveira.

11:20-11:40 *Scribability problems for polytopes.* Arnau Padrol and Hao Chen.

11:40-12:00 *Discrete Geometry on 3 Colored Point Sets in the Plane.* Mikio Kano.

12:00-12:20 *Point sets in the plane as lengths of subsequences of permutations.* José Luis Álvarez, Jorge Cravioto and Jorge Urrutia.

12:20-12:40 *On the disks with diameters the sides of a convex 5-gon.* Clemens Huemer and Pablo Pérez-Lantero.

12:40-13:00 *Stabbing circles for sets of segments in the plane.* Mercè Claverol, Elena Khramtcova, Evanthia Papadopoulou, Maria Saumell and Carlos Seara.

13:00-13:05 Closure

13:05 Lunch



## Social event in memory of Ferran Hurtado

What: wine tasting (no food)

When: Wednesday July 1, 19:00

Where: Celler de Gelida, C/ Vallespir 88

Closest metro stop: Plaça del Centre  
(L3, green line)

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## Conference Dinner

What: Conference dinner

When: Thursday July 2, 21:00

Where: **Restaurant 1881**, Plaça Pau Vila 3  
Phone +34 932210050

Closest metro stop: Drassanes (L3, green line)  
+ walk / bus (59 or D20)

The entrance to the building (Palau de Mar) is through the archways located in the center of its longest facades. Follow signs to the entrance of the **Museu d'Història de Catalunya**. At the end of the entrance hall, the elevators will take you to the 4th floor, where restaurant 1881 is located.

- **From the venue or from residences Torre Girona or Penyafornt-Montserrat:** Take metro at Palau Reial, direction Trinitat Nova, until station Drassanes. From there, we recommend to walk (15 minutes, nice walk). Alternatively, you can take the bus number 59 or D20 in direction "Passeig Marítim" (take the bus at stop "Portal de la Pau", on street Passeig de Colom). Get off at bus stop "Pg. Joan de Borbó", and walk back around 200m.
- **From residence Investigadors:** By foot it takes 20-25 minutes through very touristic parts of the city. Alternatively, you can take bus 59 from bus stop "La Rambla-Boqueria" (on the Rambles), in direction "Passeig Marítim". Get off at bus stop "Pg. Joan de Borbó", and walk back around 200m.
- **From residence Campus del Mar:** By foot, only 7 minutes away.

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## Contacting locals [egc15@upc.edu](mailto:egc15@upc.edu)

In case you need some local help

Vera Sacristán +34 676720387  
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## Lunches

In your registration pack, you received three lunch tickets.

Lunch consists of a salad dish, a dessert, a bottle of water or glass of wine, and a main course (actually, as many main courses as you want!).

In more detail, it works as follows:

1. Take a tray and a plate.
2. Choose whatever you want from the salad buffet.
3. Pick your drink: small water bottle (still or sparkling) or glass of wine. Other drinks have an additional cost, which you would have to pay by yourself.
4. Pick your dessert: yogurt, fruit,...
5. Give one lunch ticket to the cashier.
6. Pick a glass and some bread.
7. Take a seat wherever you want.
8. In addition to your salad, you can pick a main course from the central area of the dining room. The options will be (usually from left to right): some fish, some meat, some vegetables, pasta or rice, soup, or pizza. You can take as many of these as you want.

**Location.** Lunches take place at the cafeteria of the *Faculty of Physics*, in a different building 5 minutes away from the venue.



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## Internet connection

There are three ways to connect to the internet:

- Use eduroam
- Use XSF-UPC, open a browser and enter as Guest (no password). This gives only limited access, mostly for web browsing.
- Otherwise, you can use XSF-UPC with the following login information:  
username: xsf.convitad  
password (June 30): Wh1pl4sh  
password (July 1-3): 49T0m4t4

Desktop computers (rooms PC3, S03, S05)  
username: EGC  
password: EGC2015

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For more information visit the conference web site:  
<http://www-ma2.upc.es/egc15/>