

**Proposal to host the 17th International Conference on
Discrete Geometry for Computer Imagery in Seville**



This document describes our proposal to host the next DGCI conference on March 2013 in Seville, Spain. The conference would take place in the School of Computer Engineering located in Reina Mercedes Campus of the University of Seville, which is one of the oldest (more than 500 years) and largest universities in Spain (made up of more than 70,000 students, 4,400 professors, and 2,400 service and administrative professionals).

The organizing team would belong to the Applied Math (I) Department, which is located at the School of Computer Engineering. All the Spanish members of the Andalusian research group FQM369: Combinatorial Image Analysis (CIA group), belong to the proposed DGCI 2013 organizing committee (three permanent members and two PhD students), whose main research area is the use of combinatorial tools for topological analysis of digital data sets.

First part is devoted to a presentation of the proposed conference location. Afterwards, we give details on the scientific and financial aspects of this proposal.

Conference location

The proposed conference location is the School of Computer Engineering or [Escuela Técnica Superior de Ingeniería Informática](#) ([University of Seville](#)) in Avda. Reina Mercedes , s/n, 41012 Seville, Spain.



Seville

Seville, the capital of Andalusia, is populated by more than 700,000 inhabitants. It has nearly 3,000 hours of sunshine throughout the year with an average temperature of 18.6 °C. According to legend, Sevilla was founded by Hercules and its origins are linked with the Tartessian civilization. It was called Hispalis under the Romans and Isbiliya with the Moors. Its high point in its history was following the discovery of America.



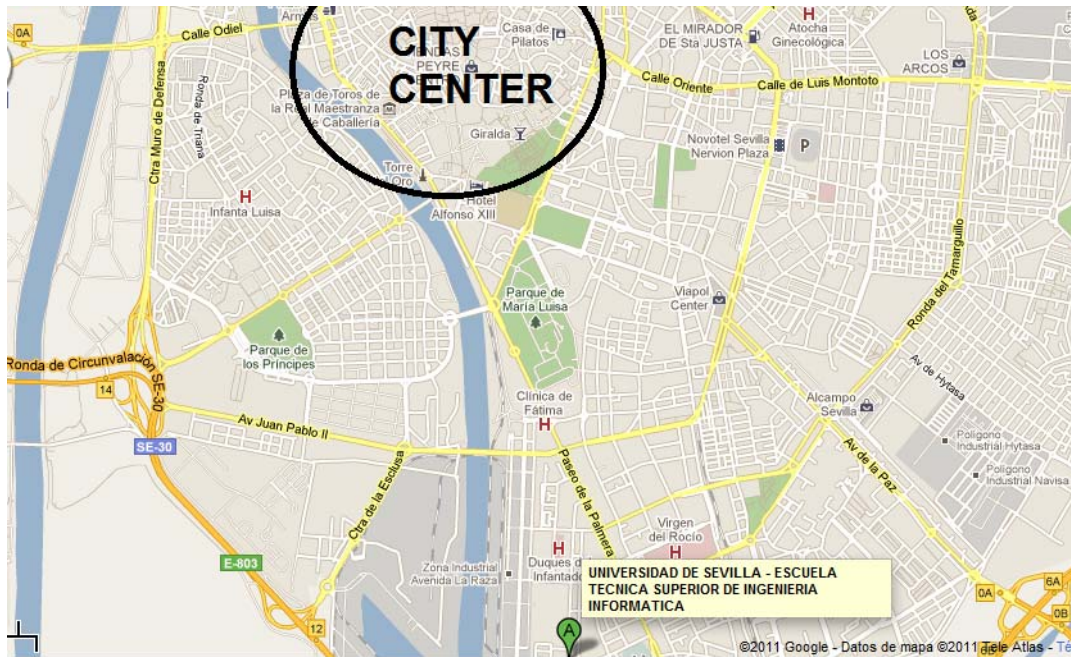
Sevilla lies on the banks of the Guadalquivir and is one of the largest historical centers in Europe, it has the minaret of La Giralda, the cathedral (one of the largest in Christendom), and the Alcázar Palace.



Part of its treasure include Casa de Pilatos, Torre del Oro, the Town Hall, Archive of the Indies (where the historical records of the American continent are kept), the Fine Arts Museum (the second largest picture gallery in Spain), plus convents, parish churches and palaces. Seville also offers an extensive cultural experience: world-famous monuments, concerts, theatre, flamenco, local festivals, gastronomy, etc. What's more, the Sevillian population have an active social life; they love to talk and to meet newcomers. More information can be found in http://www.sevilla.org/turismo/paginas_en/portada.asp

The School of Computer Engineering

Founded in the year 1505, the University of Seville is one of the oldest and largest universities in Spain. The “Escuela Técnica Superior de Ingeniería Informática” is located in Reina Mercedes Campus (whose excellent facilities include an area of 24,000 m², gardens, library with seating for 400, and WIFI), five minutes away from the local Virgen del Rocío train station, and well connected to the rest of the city via buses 34, 6 and 2, a cycle-path network and several SEVICI stations (public bicycle rental service). It is also surrounded by other services such as the university canteen, the Bermejales sports complex, study halls, bars and cafes, banks and shops. The city center is about 40 minutes on foot and there are regular buses (line 34) every 7 minutes until 22:00, and from 22:00 to 23:30, every 15 minutes. The relative location with respect to the city center is shown in the picture below.



Conference hall

There are two main halls available for DGCI conference equipped with the most modern audiovisual media (including WIFI):

“El Salón de Grados” can accommodate up to 100 people.



“El Salón de Actos” can accommodate up to 500 people.



Several meeting rooms are also available for working groups and discussions, near the conference halls.

The School has strong experience at hosting conferences and international events. For example, it will host next CAIP 2011 at the end of August, 2011.

Accommodation

Recommended student residences (walking distance to the conference venue):

- Rector Estanislao del Campo: <http://www.rusevilla.com/>

The rate is 40,70 euros per night. We can prebook 20 rooms for the conference. Extra rooms can be booked on availability.

- Residencia Los Bermejales: <http://www.residenciauniversitaria.com/>

Single room 29,46 euros per night; double room 26,50 euros per night and person. We can prebook 50 rooms for the conference. Extra rooms can be booked on availability.

- Residencia Hernando Colón: <http://intra.sav.us.es:8080/cmh/>

Single room 38,35 euros per night, breakfast included; double room 27,50 euros per night and person, breakfast included. We can prebook 15 rooms for the conference.

Recommended 4 and 3 star hotels (walking distance to the conference venue):

- [Hotel Silken Al-Andalus Palace.](#) Avenida de la Palmera s/n, esquina Paraná, 41012.



Approximated rates: single room 90 euros per night; double room 100 euros per night. Breakfast is included.

- [Hotel AC Ciudad de Sevilla](#) in Avda. Manuel Siurot, 25, 41013.



Approximated rates: single room 110 euros per night; double room 120 euros per night. Breakfast is included.

- [Hotel Sevilla Palmera](#) in C/Cardenal Ilundain, 28, 41013.



Approximated rates: single room 64 euros per night; double room 72 euros per night.

Transportation

Reaching Seville by plane:

Seville Airport (*Aeropuerto de Sevilla*) (IATA: **SVQ**, ICAO: **LEZL**) is the main airport for Seville and is Andalusia's second airport, behind Málaga. It has one terminal and one runway. See more information of the San Pablo International Airport in:

<http://www.aena.es/csee/Satellite?SiteName=Home&c=Page&cid=1166792871783&pagename=Home>

Seville Airport is about 10 km. from the city center. There is a good service of taxi and bus connecting the airport with the city center (*Prado de San Sebastián*).. The timetable of the bus service is available at <http://www.tussam.es/index.php?id=200>.

Reaching Seville from Madrid:

There are three ways to get to Seville from Madrid:

By plane: If you fly to Barajas Airport in Madrid, the easiest way to reach Seville is by taking another plane to Seville.

By train: You can also travel easily from Madrid to Seville by train in 2.5 hours. Trains to Seville depart from Atocha Train Station. The timetable and prices are available at <http://www.renfe.com/EN/viajeros/index.html>.

If you arrive to Madrid by plane and you want to travel to Seville by train you can go from the Airport to the train station by taxi, but the cheapest and fastest way is the underground. Information about the underground service (including a detailed map) is available at <http://www.metromadrid.es/>.

By bus: It is the cheapest way to get from Madrid to Seville, although the trip takes about 6 hours. Buses depart from "Estacion Sur" (Mendez Alvaro s/n, local 3-4) which can be reached by taxi or underground, and the bus company is Socibus. The timetable and prices are available at the company web site: <http://www.socibus.es/>

How to get to the conference site:

By bus: Bus line 34 is the best option connecting the city center (*Prado San Sebastián*) with the conference site. Bus 34 stops exactly in front of the building. Bus line 6 stops in the same place as well and connects *Triana, Torneo (Plaza de Armas Bus station)* and *Barqueta* with the conference site. Many buses announce each stop through displays and loudspeakers. The bus stop for the conference site is "Avenida Reina Mercedes. Escuela Superior de Ingeniería Informática." You can find more information about urban buses at www.tussam.es (in Spanish!).

By bike: You can also use the bike service in Seville, Sevici, to reach the building. There are several Sevici stations in the city, normally next to the

bicycle lane. You can subscribe to the service for 7 days for 10€. More information is available at <http://en.sevici.es/>

By foot: You can check maps of Seville at: <http://maps.google.com>, <http://callejero.paginasamarillas.es/home.asp> or <http://www.mappy.com>.

Proposed dates (conference dates and deadlines)

We plan to organize the conference on March 20-23, 2013, before the Holly Week (see “Other information” at the end of the proposal).

. Based on this hypothesis, the deadlines would be as follows:

- First announcement, theme presentation, call for papers, website: April 9, 2012
- Second announcement and call for papers with the presentation of invited speakers: June 11, 2012
- Submission deadline: July 9, 2012 (extension to July 20).
- Notification: November 5, 2012
- Camera ready submission: December 10, 2012
- Conference date: March 20-22, 2013

For the conference date, we have also taken into account information on other conferences:

IWCIA (every 18 months) will be held in May 2011, so next one is expected in autumn 2012.

ISMM (every 2 years) will be held in July 2011, so next one is expected in summer 2013.

GbR (every 18 months) will be held in May 2011, so next one is expected in autumn 2012.

ICPR (every 2 years) was held in August 2010, so next one is expected in autumn 2012.

CAIP (every 2 years) will be held in August 2011, so next one is expected in summer 2013.

DGCI topics

According to previous editions and upon recommendations of the Steering Committee, we consider the classical DGCI topics:

- Models for Discrete Geometry (grids, discrete objects, discrete model properties, digitization schemes, metrics,...).
- Discrete and Combinatorial Topology.
- Geometric Transforms (image mappings, distance transformation, skeletons and medial axis,...).
- Discrete Shape Representation, Recognition and Analysis.
- Discrete Tomography.
- Morphological Analysis.
- Discrete Modelling and Visualization.
- Discrete and Combinatorial Tools for Image Segmentation and Analysis

The IAPR support is requested through the association of this conference with the Technical Committee 18 on Discrete Geometry.

Submission and review process

Concerning the overall process, the submission of full papers will be reviewed by the DGCI Reviewing Committee and selected for either oral or poster presentation.

More precisely, we expect to follow the reviewing process used at the previous DGCI :

- Each Program Committee (PC) member is in charge of one DGCI topic.
- Each Reviewing Committee (RC) member is “labeled” with one or more topic.
- The choice of reviewers for a given paper will be made with the PC member in charge of the main topic of the paper, among a list of specialists for this topic.
- In case of contradiction between the two original reviewers of a given paper or in case of problem with one reviewer, the PC member in charge of the main topic of the paper is involved.

The technical aspects of this process will be managed by the ConfTool system (used since the 12th edition). According to the Steering Committee recommendations, blind submission and reviews may be considered. The final decision step will be done by the Program Chairs with help from the Steering Committee.

Suggestion for Invited Speakers

The invited speakers list should be decided in coordination with the Steering Committee. We just address here some suggestions:

- Prof. Dr. Konrad Polthier. MATHEON-Professor and head of the Mathematical Geometry Processing group at the Institute of Mathematics at FU Berlin. Full professor of Mathematics with research interests in the areas mathematical geometry processing, discrete differential geometry and mathematical visualization.

Homepage: <http://page.mi.fu-berlin.de/polthier/>

- Prof. Dr. Robert Ghrist. University Professor at the Departments of Mathematics & Electrical / Systems Engineering, University of Pennsylvania. Research interest in applied topology, that is, applications of topology to engineering system, data, dynamics, ...

Homepage: <http://www.math.upenn.edu/~ghrist/>

Proceedings and special issues

We plan to publish the proceedings in the LNCS series of Springer-Verlag.

Special Issues are proposed to be published in two of the following journals:

Pattern Recognition Letters aims at rapid publication of concise articles of a broad interest in pattern recognition. Subject areas include all the current fields of interest represented by the Technical Committees of the International Association of Pattern Recognition, and other developing themes involving learning and recognition.

Computer Vision and Image Understanding publishes papers covering all aspects of image analysis from the low-level, iconic processes of early vision to the high-level, symbolic processes of recognition and interpretation.

Discrete & Computational Geometry (DCG, Co-editors in chef: H. Edelsbrunner; J. Pach; G.M. Ziegler) is an international journal of mathematics and computer science, covering a broad range of topics in which geometry plays a fundamental role. It publishes papers on such topics as: polytopes, spatial subdivision, packing, covering, and tiling, configurations and arrangements, and geometric graphs; geometric algorithms and their complexity, convex hulls, Voronoi diagrams, Delaunay triangulation, and range searching; solid modeling, computer graphics, image processing, pattern recognition, and motion planning; computational topology, discrete differential geometry, geometric probability, and real algebraic geometry. The journal also accepts papers with a distinct geometric flavor in such areas as graph theory, mathematical programming, combinatorial optimization, algebraic geometry, geometry of numbers, crystallography, data analysis, machine learning, and robotics.

Proposed organizing committee:

The members of the organizing committee work at the Applied Math (I) Department of the University of Seville. This department is located in the “Escuela Técnica Superior de Ingeniería Informática”, the proposed conference site. Four of them (including the proposed chairs of the conference) belong to the recently created Andalusian research group *Combinatorial Image Analysis (“CIA” research group)* (http://investigacion.us.es/sisius/sis_depgrupos.php?seltext=FQM-019&selfield=CodPAI). The main research interest of the group is the use of combinatorial tools for topological analysis of digital images and they regularly publish in conferences in this area (DGCI, IWCIA, CTIC, CAIP, GbR,...).

- Rocio Gonzalez-Diaz (co-chair)
 - Associate professor (permanent position), School of Computer Engineering, University of Seville.
 - Doctoral degree in Mathematics in 2000 at the University of Seville.

- Program chair of the 3rd International Workshop on Computational Topology in Image Context, CTIC 2010, <http://congreso.us.es/ctic2010>.
- Member of the program committee of the 14th International Conference on Computer Analysis of Images and Patterns, CAIP 2011, <http://congreso.us.es/caip2011/>.
- Member of the scientific committee of the 2nd and 4th International Workshop on Computational Topology in Image Context, CTIC 2009 and 2012, <http://www.prip.tuwien.ac.at/events/conferences/ctic09> and <http://ctic2012.dm.unibo.it>.
- PC member of the Mexican International Conference on Artificial Intelligence, MICAI, 2008 <http://www.micai.org/>.
- Head of CIA research group since December 2010.
- Maria Jose Jimenez (co-chair)
 - Associate professor (permanent position), School of Computer Engineering, University of Seville.
 - Doctoral degree in Mathematics in 2003 at the University of Seville.
 - Chair of the Spanish Conference on Teaching Computer Engineering, JENUI 2011, <http://jenui2011.us.es/>.
 - CTIC 2010 and CTIC 2012 scientific committee member.
 - CAIP 2011 program committee member.
 - Member of CIA research group
- Belen Medrano
 - Associate professor (permanent position), School of Computer Engineering, University of Seville.
 - Doctoral degree in Mathematics in 2008 at the University of Seville.
 - CTIC 2010, JENUI 2011 and CAIP 2011 organizing committee member.
 - Member of CIA research group
- Antonio Martin

- Assistant professor, School of Computer Engineering, University of Seville.
- Doctoral degree in Computer Science in 2002 at the University of Seville.
- JENUI 2011 organizing committee member.
- Member of the Andalusian research group TIC153: Instrumentación Electrónica y Aplicaciones
- Regina Poyatos
 - PhD student.
 - CTIC 2010, JENUI 2011 and CAIP 2011 organizing committee member.
 - Member of CIA research group
- Lidia de la Torre
 - PhD student
 - CAIP 2011 organizing committee member.
 - Member of the Andalusian research group FQM260: Variable compleja y teoría de operadores.
- Ana Maria Pacheco
 - PhD student
 - CTIC 2010 and CAIP 2011 organizing committee member.
 - Member of the Andalusian research group FQM296: Computational Topology and Applied Math.

Proposed program outline:

We propose a program with 3 invited talks (one each day of the conference), 21 talks distributed in 8 sessions, and 24 posters (similar than previous DGCIIs). We plan to organize two “fast tracks” sessions in order to present the content of the posters. With a condensate presentation of 5 minutes using 2 or 3 slides, the authors could present their poster to all the participants.

	Wednesday, March 20	Thursday, March 21	Friday, March 22
8:30-9:00	Registration		
9:00-9:30	Opening	Registration	
9:30-10:30	Invited speaker	Invited speaker	Invited speaker
10:30-11:00	Coffee break	Coffee break	Coffee break
11:00-11:50	Session 1	Session 5	Session 6
11:50-13:05	Session 2	Fast track I	Session 7
13:05-14:45	Lunch	Lunch	Lunch
14:45-16:00	Session 3	Fast track II	Session 8
16:00-16:30	Coffee break	Coffee break	Farewell and coffee break
16:30-17:45	Session 4	Poster session	
17:45-18:45		TC 18 Meeting	
19:30-20:30	Guided visit		
20:30		Gala Dinner (20:30)	

Financial plan:

We make our estimations assuming the same registration fees than the ones of DGCI 2011:

	Regular	IAPR member	Student
Early registration (04/02/2013)	290	275	180
Late registration	320	305	210

Gala dinner extra ticket	75
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The registration fee includes: the proceedings, the lunches, the coffee breaks and the social events.

Assuming similar number of registrations than in DGCI 2011, we could consider an average registration of 255 euros:

Incoming			
Concept	Amount	Incoming per unit	Total
Registrations	80	255,00 €	20.400,00 €
Vicerrectorado Investigación	1	2.500,00 €	2.500,00 €
Applied Math Department	1	600,00 €	600,00 €
Extensión Universitaria	1	1.500,00 €	1.500,00 €
FIDETIA	1	300,00 €	300,00 €
		Incoming	25.300,00 €

Expenses (90 participants)			
Concept	Amount	Expenses per unit	Total
Publicity brochures, posters, programs etc.	300	1,00 €	300,00 €
LNCS proceedings	100	32,00 €	3.200,00 €
Participant's bags	90	10,00 €	900,00 €

Lunches	270	10,00 €	2.700,00 €
Coffee Breaks	540	6,00 €	3.240,00 €
Reception	90	30,00 €	2.700,00 €
Guides (visit)	3	150,00 €	450,00 €
Gala dinner	90	75,00 €	6.750,00 €
Invited speakers	3	1.000,00 €	3.000,00 €
		Expenses	23.240,00 €

Social program:

Visit to the Royal Alcazar:

The Royal Alcazar Palace is a place that deserve an obligatory visit in Seville. The Alcazar is a monumental complex that comes from the Muslim period. It consists of a series of palaces from different times and styles that is why they are called Royal Alcazars. Its gardens, halls, courtyards, orchards and rooms decorated with glazed tile from Seville are important.



Its rooms are related to kings such as Al-Mutamid, Fernando III of Castilla, Alfonso X, Pedro I el Cruel or the Catholic Kings. It was the temporary residence of the Kings of Spain.

Gala dinner:

We have in mind two alternative places for the conference banquet:

- A prestigious restaurant in the city center, *Los Seises*, near the Cathedral.



An initial cocktail could take place at the terrace with views to the Giralda tower.

- Our second option is a modern restaurant on the bank of the Guadalquivir river.



Other information:

Holy (Easter) Week will be from 24th to 31st of march of 2013, so attendants to the conference could stay some more days to know this traditional event. Seville has been holding its Easter week celebrations since the 16th century, and they have become universally famous. Some 50,000 people put on traditional robes to parade in the 58 organized processions, while the "costaleros" carry the "pasos" (religious statues) on their shoulders. There are processions in the evening and at night every day. The "saetas" are very emotional moments of the processions: these are flamenco songs, recited "a capella" from the balconies in honor of the statues.