

# 13th International Conference on Geometry and Graphics

*Dresden, August 4-10, 2008*

Each even year the International Society for Geometry and Graphics (ISGG) organizes the International Conference on Geometry and Graphics (ICGG). This year the conference was held in Dresden, Germany and was organized in cooperation with the German Society for Geometry and Graphics (DGfGG). Individuals and institutions can become members of ISGG (on contrary, only countries can be members of the International Cartographic Association).

Because this is the first time such a conference is presented to the readers of *Cartography and Geoinformation*, we will take the opportunity and tell you a bit more about ISGG and its conferences. The conferences on geometry and graphics have been organized before ISGG was founded. The first international conference on descriptive geometry was organized in 1978 in Vancouver, Canada. The organizer was Engineering Design Graphics Division of the American Society for Engineering Education. There was one participant from Croatia, Prof. Ksenija Horvatić-Baldasari (now a retired professor of descriptive geometry from the Faculty of Mechanical Engineering and Naval Architecture). The second conference was held in Beijing, China six years later, in 1984. The title of the conference was "2nd

Conference on Engineering Computer Graphics and Descriptive Geometry". The third conference with the same title as the second was held in Vienna, Austria in 1988, where Prof. K. Suzuki from Japan proposed the foundation of the International Society for Geometry and Graphics. The committee was established and proposed the membership based on countries, but due to small number of national societies at that time, individual membership was accepted. Participants from Croatia (Miljenko Lapaine, Svetozar Petrović and Nada Vučetić) were also present at the conference. The next, fourth conference with the same title was held in Miami, USA where the name *International Society for Geometry and Graphics* (ISGG) was approved together with a draft of the statute.

ISGG was founded and its final statute approved on the fifth conference held in Melbourne, Australia in 1992. The sixth conference was held in Tokyo, Japan in 1994, and the Society's website was launched in the same year ([www.isgg.net](http://www.isgg.net)). Journal publishing was proposed on the seventh conference held in Krakow, Poland in 1996. The *Journal for Geometry and Graphics* was started in 1997 and is published twice a year. On the next conference in Austin, Texas in 1998, ISGG

was recognized as the formal conference organizer and a decision was made that the conference name would be the *International Conference on Geometry and Graphics* (ICGG) and that numbering would be continued from previous conferences.

Since then, ICGG has been held each even year in another city:

- ❑ 9th ICGG in Johannesburg, South Africa (2000),
- ❑ 10th ICGG in Kiev, Ukraine (2002),
- ❑ 11th ICGG in Guangzhou, China (2004),
- ❑ 12th ICGG in Salvador, Brazil (2006),
- ❑ 13th: ICGG in Dresden, Germany (2008),

while the 14th ICGG is planned for Kyoto, Japan in 2010.

The Croatian Society for Geometry and Graphics was established in 1994 and it is a member of ISGG. Its first president was Prof. Vlasta Ščurić from the Faculty of Geodesy, University of Zagreb. The current president is Prof. Sonja Gorjanc from the Faculty of Civil Engineering, University of Zagreb. The website of the Croatian Society for Geometry and



## 13. međunarodna konferencija o geometriji i grafici

*Dresden, 4-10. 8. 2008.*

Međunarodno društvo za geometriju i grafiku (International Society for Geometry and Graphics - ISGG) svake dvije godine organizira međunarodnu konferenciju o geometriji i grafici. Ove godine konferencija je bila u Dresdenu u Njemačkoj, u čijoj je organizaciji sudjelovalo i Njemačko društvo za geometriju i grafiku. Članovi Međunarodnoga društva za geometriju i grafiku mogu postati pojedinci ili institucije (primjerice u Međunarodnom kartografskom društvu članovi za sada mogu biti samo države).

S obzirom na to da čitateljima *Kartografije i Geoinformacija* prvi put prikazujemo jednu takvu konferenciju potrebno je nešto više reći o samom društvu i njegovim konferencijama. Konferencije o geometriji i grafici organizirane su i prije nego što je Društvo formalno osnovano. Prva međunarodna konferencija o konstruktivnoj geometriji održana je u Vancouveru u Kanadi 1978. godine u organizaciji Sekcije za inženjersku i projektantsku grafiku Američkoga društva za inženjersko obrazovanje. Na toj konferenciji sudjelovala je prof. Ksenija Horvatić-Baldasari (sada umirovljena profesorica nacrte geometrije s Fakulteta strojarstva i brodogradnje u Zagrebu. Nakon šest godina, 1984. godine u Pekingu je održana Druga konferencija o inženjerskoj kompjutorskoj grafici i konstruktivnoj geometriji (ICECGDG). Treća konferencija, istog naziva kao i druga, održana je 1988. u Beču, gdje je prof. K. Suzuki iz Japana predložio osnivanje međunarodnoga društva za geometriju i grafiku.

Osnovano je povjerenstvo koje je najprije predložilo da se društvo sastoji od država članica, međutim zbog malog broja nacionalnih društava u to doba ipak je usvojeno individualno članstvo. Na toj su konferenciji sudjelovali i predstavnici iz Hrvatske (Miljenko Lapaine, Svetozar Petrović i Nada Vučetić). Sljedeća, četvrta konferencija istoga naziva održana je u Miamiu u SAD-u gdje je usvojen službeni naziv *Međunarodno društvo za geometriju i grafiku* i prihvaćen nacrt statuta.

Na petoj međunarodnoj konferenciji o inženjerskoj računalnoj grafici i nacrtnoj geometriji (International Conference on Engineering Computer Graphics and Descriptive Geometry - ICECGDG) u Melbournu u Australiji, koja je održana 1992. godine prihvaćen je statut društva i Međunarodno društvo za geometriju i grafiku (ISGG) formalno je osnovano. Šesta konferencija održana je u Tokiju u Japanu 1994., a te su godine pokrenute i web-stranice društva ([www.isgg.net](http://www.isgg.net)). Na sedmoj konferenciji u Krakovu u Poljskoj 1996., predloženo je pokretanje časopisa. Časopis nosi naziv *Journal for Geometry and Graphics* i izlazi dvaput godišnje, a prvi broj izašao je 1997. Na sljedećoj, osmoj konferenciji u Austinu u Texasu održanoj 1998. ISGG bilo je i formalni organizator konferencije, a odlučeno je da će novo ime konferencija biti *Konferencija o geometriji i grafici*, te da će se redni broj konferencije nastaviti na prethodne.

Od tada se Konferencija o geometriji i grafici održava svake parne godine u

nekom drugom gradu i na drugom kraju svijeta:

- 9. konferencija u Johannesburgu, Južnoafrička Republika (2000),
- 10. konferencija u Kijevu, Ukrajina (2002),
- 11. konferencija u Guangzhou, Kina (2004),
- 12. konferencija u Salvadoru, Brazil (2006),
- 13. konferencija u Dresdenu, Njemačka (2008),

dok se sljedeća 14. konferencija planira u Kyotu u Japanu, 2010. godine.

U Hrvatskoj od 1994. godine djeluje i nacionalno društvo, *Hrvatsko društvo za geometriju i grafiku* koje je član Međunarodnoga društva za geometriju i grafiku. Prva predsjednica toga društva bila je prof. dr. sc. Vlasta Ščurić s Geodetskog fakulteta. Aktualna predsjednica je prof. dr. sc. Sonja Gorjanc s Građevinskog fakulteta Sveučilišta u Zagrebu. Web-stranice Društva su na adresi [www.hdgg.hr](http://www.hdgg.hr). Društvo od 1996. jednom godišnje izdaje časopis *KoG* te redovito organizira konferencije i savjetovanja.

Pripreme za sudjelovanje na konferenciji u Dresdenu započele su prije otprilike godinu dana kada smo primili prvu obavijest i rokove za slanje sažetaka i radova, te rokova za registraciju. Sve je radove recenzirao međunarodni znanstveni odbor. Sveukupno, na konferenciji je održano 10 pozvanih predavanja, 160





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Graphics can be found at the address [www.hdgg.hr](http://www.hdgg.hr). The society has published the journal *KoG* once a year since 1996. It also organizes conferences and symposia on a regular basis.

Preparations for the conference in Dresden started about one year ago, when we received the first call for papers and the deadlines for sending abstracts, papers and registrations. The papers were reviewed by an international scientific committee. A total of 10 invited lectures and 160 presentations in technical sessions were held. There were 250 registered participants. In addition to lectures and presentations, participants were invited to visit the exhibition *Good Vibrations – Geometry and Art* and to join an excursion and a dinner. During the conference there were working meetings, tourist visits to the city and country, and rewards were given during the closing session. The presentations were divided into four sessions according to the given themes: theoretical graphics and geometry, applied geometry and graphics, geometry and art and education.

The conference venue was the campus of the Technical University in Dresden.

The conference was the opportunity to celebrate the 300th anniversary of the death of the German mathematician Ehrenfried Walther von Tschirnhaus. He was a scientist with special interest in geometrical construction of curves and in production of concave mirrors for focusing sunlight. With such mirrors, he was able to produce high temperatures and he participated with this in inventing the first European porcelain. He was famous

for being the first foreign member of the French Academy of Sciences.

There were seven participants from Croatia at the conference, and most of them had a presentation. Following papers were presented by Croatian authors:

1. Sonja Gorjanc: Special  $n$ th Order Surfaces With  $(n-2)$ -ple Line Algebraic Surfaces Given by Inversion
2. Ema Jurkin: Circular Curves of Order Four in Isotropic Plane Produced by Inversion
3. Lidija Pletenac: Constructability of Quartic Curves Using Different Methods of Deduction
4. Marija Šimić: On Some Properties of Non Cyclic Quadrangle in Isotropic Plane
5. Dražen Tutić, Miljenko Lapaine: Stereographic Map Projection for Croatia

If the number of participants by country is represented on a world map (Fig. 1), it can be seen that the majority of participants came from Japan (51) and Germany (37). Australia was the only inhabited continent not represented on the conference.

The proceedings were published on a CD having ISBN 978-3-86780-042-6. The proceedings were distributed together with the book in A5 format and with 308 b/w pages with a detailed program and abstracts were printed. The content of the proceedings on the CD is presented in HTML format with papers in PDF. Papers can be searched by the author's name. Besides papers, proceedings includes a

list of participants, a welcome word and impressum. Furthermore, there is an *In Memoriam* for the honorary president of the ISGG and the 13th ICGG organizing committee and founder of the idea for an international geometry society, Prof. Steve M. Slaby who died on July 6, 2008. There is also a text on the 300th anniversary of the death of Ehrenfried Walther von Tschirnhaus.

After the working sessions, the participants were able to enjoy the city and its surroundings. It is well known that Dresden was heavily bombed at the end of the Second World War, during which the city was almost completely destroyed. Today, the city is rebuilt and restored and visitors can again enjoy the architecture, museums, exhibitions or spend their time tasting the rich and versatile gastronomy. Dresden's surroundings can be reached by local railway or by boats on the river Elbe; for example, Meissen, the centre of European porcelain, or the so-called Saxonian Switzerland, the mountain region with canyon of the river Elbe and peculiarly shaped rocks. It is worth to mention the multimedia exhibition titled *Dresden 1756*, the 360° panoramic image, 100×27 meters in size in form of a cylinder. It shows Dresden as it was during the baroque, according to vision of the author Yadeger Asisi. The panorama provides a unique visual and ambient experience.

Finally, we have to congratulate the organizers on a successful conference.

*Dražen Tutić  
Miljenko Lapaine*



prezentacija u tehničkom dijelu, a prijavljeno je bilo 250 sudionika. Osim predavanja, organizirani su izložba *Good Vibrations – Geometry and Art*, izlet i svečana večera. Događali su se različiti radni sastanci, organizirane su turističke posjete po gradu i okolici, a na zatvaranju su podijeljene i nagrade. Prezentacije su se odvijale u četiri paralelne sekcije prema zadanim temama i to: teorijska geometrija i grafika, primijenjena geometrija i grafika, geometrija i umjetnost te obrazovanje.

Sve se to odvijalo u kampusu Tehničkoga sveučilišta u Dresdenu.

U sklopu konferencije obilježena je obljetnica 300 godina od smrti njemačkog matematičara Ehrenfrieda Walthera von Tschirnhausa, znanstvenika koji je imao poseban interes za geometrijske konstrukcije krivulja i izradu konkavnih zrcala za usmjeravanje sunčeve energije te na taj način mogućnosti postizanja visokih temperatura. Poznat je po tome što je bio prvi stranac član Francuske akademije znanosti, a sudjelovao je i u stvaranju prvog europskog porculana u Meissenu.

Na konferenciji je sudjelovalo sedam sudionika iz Hrvatske, od kojih je većina imala i prezentaciju rada. Popis radova autora iz Hrvatske je:

1. Sonja Gorjanc: Special nth Order Surfaces With (n-2)-ple Line Algebraic Surfaces Given by Inversion
2. Ema Jurkin: Circular Curves of Order Four in Isotropic Plane Produced by Inversion
3. Lidija Pletenac: Constructability of Quartic Curves Using Different Methods of Deduction
4. Marija Šimić: On Some Properties of Non Cyclic Quadrangle in Isotropic Plane
5. Dražen Tutić, Miljenko Lapaine: Stereographic Map Projection for Croatia

Prikažu li se sudionici i njihov broj iz cijelog svijeta na karti (slika 1) vidi se da

ih je najveći broj bio iz Japana (51) i Njemačke (37). Od naseljenih kontinenata jedino nije bila zastupljena Australija.

Zbornik radova objavljen je na CD-u, nosi ISBN 978-3-86780-042-6. Zbornik radova isporučen je zajedno s knjižicom formata A5 na 308 crno-bijelih stranica u kojoj je objavljen detaljni program konferencije zajedno sa sažecima radova. Sadržaj zbornika na CD-u prezentiran je u HTML-u, a radovi su objavljeni u formatu PDF. Osim radova koje je moguće pretraživati po prezimenu autora, u zborniku se nalazi i popis sudionika, pozdravna riječ i impresum. Također, objavljen je *in memoriam* počasnom predsjedniku ISGG-a i organizacijskog odbora i začetniku ideje o međunarodnome društvu za geometriju Steveu M. Slabyju koji je preminuo 6. srpnja 2008. Tu je i tekst u povodu 300-te obljetnice od smrti Ehrenfrieda Walthera von Tschirnhausa.

Osim konferencije i radnoga dijela, sudionici su imali priliku uživati u obilascima grada i okolice. Poznato je da je Dresden

krajem Drugoga svjetskog rata doživio stravično bombardiranje u kojemu je grad gotovo srušen sa zemljom. Međutim, danas je grad obnovljen i posjetitelji ponovo mogu uživati u arhitekturi, muzejima, izložbama ili provesti vrijeme kušajući bogatu i raznovrsnu gastronomsku ponudu. Lokalnom željeznicom ili brodom po rijeci može se posjetiti i okolica grada, primjerice grad Meissen, središte europskog porculana, ili saksonska "Švicarska", planinski dio s kanjonom rijeke Elbe i neobičnim oblicima stijena. Vrijedi spomenuti i jednu multimedijску instalaciju pod imenom *Dresden 1756*, panoramsku sliku veličine 100×27 metara u obliku cilindra, gdje posjetitelji mogu doživjeti barokni Dresden kakav je bio 1756. godine prema viziji autora Yadegara Asisija. Panorama zaista pruža jedinstven trodimenzionalni i ambijentalni doživljaj.

Na kraju treba čestitati organizatorima na uspješnoj konferenciji.

Dražen Tutić  
Miljenko Lapaine

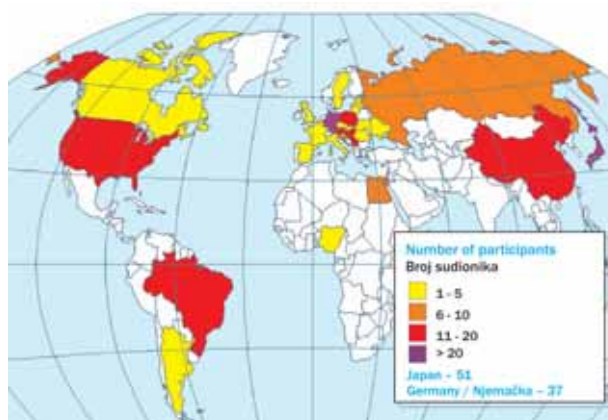


Fig. 1. Participants by country

Slika 1. Sudionici po zemljama svijeta