



IV° INTERNATIONAL TRAINING COURSE IN **TOPOGRAPHY** FOR YOUNG SURVEYORS

17.28.SEPTEMBER.2012

HOTEL AUDITORIUM
AVENIDA DE ARAGON
MADRID



Consiglio Nazionale
Geometri e Geometri Laureati



COLEGIO OFICIAL INGENIEROS
TÉCNICOS DE TOPOGRAFÍA

With the scientific and educational cooperation of



and





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OPENING MEETING

» STUTT GART+DRESDEN

MAIN MEETING ROOM

» BADEN BADEN + POTSDAM

CLOSING CEREMONY

» STUTT GART+DRESDEN

The course, organized by the Consiglio Nazionale in cooperation with S.P.A. Geoweb, and with the local support of the Spanish Land Surveyor's Associations (C.O.I.T.T.), will take place in Madrid from 17th to 28th September 2012. It will be recognized by several important International and European Associations of Surveyors as FIG (International Federation of Surveyors), FIG Foundation, CLGE (Council of European Geodetic Surveyors), EGoS (European Group of Surveyors) and UMG (Mediterranean Union of Surveyors).

The Course founded in 2006 by CNGeGL Past President, Mr. Piero Panunzi, takes places usually every year in a different city in the world. In fact in 2006 and 2010 it was organized in Rome, in 2011 in Athens and this year in Madrid.

It will be addressed to European Young Surveyors and will be held in English language. The teachers involved in this event will be from Italy, Greece, Turkey, Spain, United Kingdom.

The participants will have their accommodation in single rooms in the venue hotel.

In order to take part in the Course all participants have to satisfy the following requirements:

- a) Age up to 35 years old;
- b) Good knowledge of English language;
- c) Expertise in the field of topography (curriculum)
- d) Non present in the previous courses;
- e) Moral and psycho-physical requirements that are valid to work in the Public Administration and to practise the free profession.

In this course are involved number 17 Countries (Albania, Belgium, China, Denmark, Estonia, Germany, Kosovo, Macedonia, Moldova, Morocco, Montenegro, Russia, Slovenia, Spain and Turkey), and Italy with 10 young representatives.

For the first time we have the presence of 3 Chinese Young Surveyors, 1 German, 2 from Morocco and 1 from DENmark.

All this gives us the certainty that our initiative is appreciated and is assuming a big international dimension.

At the Opening Ceremony there will be the presence of the FIG Foundation, represented by its President, Professor John Hohol, who represents in this occasion also FIG; Professor Jean-Yves Pirlot, President of CLGE, Professor Randolph Camilleri, President of EgoS, Professor Aziz Hilali, President of UMG, Prof. Nikos Zacharias, Vice-President of EgoS, and Ms Eva Maria Unger, representative of the Young Surveyors who met all together, for the first time, in Rome during the FIG Working Week 2012.

The local Association of Surveyors, represented by its President, Andres Diez Galilea, and by Prof. Pedro Ortiz – head of international affairs, and the local Authorities.

Dott. Enrico Rispoli, Secretary General of the Consiglio Nazionale Geometri e Geometri Laureati, Surveyor Bruno Razza, member of the Consiglio Nazionale and coming FIG Vice-President elected, Dott. Giuseppe Simeone, CEO of GEOWEB and Maria Scorza and Antonietta Nigro.



Dear Friends and Colleagues,

I am happy and honored to participate in the Opening Ceremony of the IV International Training Course for Young Surveyors in Topography with all of you.

This event has been strongly wanted by the Italian surveyors in full cooperation with the European and International Organizations (FIG – FIG Foundation – CLGE – EGoS – UMG and FIG Young Surveyors Network), and with the practical contribution of Geoweb S.p.a. Therefore I thank you to be present to take a few days and explore the themes of the topography and create between you strong reasons for contacts and for professional and cultural exchanges.

Today to govern the territory means to realize the serious problems and emergencies that our planet has to face in the short term: first the emergency population followed by that of climate change caused by global warming and emissions into the atmosphere of all sorts of pollutants.

The search for alternative and renewable sources of energy has become a necessity, especially in Countries, such as the European ones, which use most of their resources to buy energy produced by fossil substances destined, sooner or later, to run out.

The collection and recycling of waste, as well as the storage and reuse of materials from the demolition of buildings, are in many regions of the world insurmountable problems if not previously planned and organized with specific projects.

I speak of all these emergencies because somehow they are linked to the topography that can not only be considered as a means of representation of the territory but it has become more and more science data collection necessary for programming and for a sustainable management of the environment in which we live.

It's true that everything starts with a fair and accurate representation of the physical territory, but this representation is used today as a tool to report any information

regarding the climate, seismic risk, geo-morphological features and any other information concerning the life and population of a given territory. Also taking into account the data related to the culture, the traditions and the heritage and history of the population.

The topography, collection and organization of data, borders in information technology and is a key element for the final political and economic choices of all people. Every “measurement, every data, every representation of a detail is a piece in the big puzzle of the global cartography that we use to find our way, to meet each other, to effectively face the emergencies. In a word, to “live”.

You all have chosen therefore an essential activity for an harmonious and sustainable development of our society. Of course not everything can be covered in this course whose main aim is to create excitement and curiosity even before specific skills which will then be developed in the operating structures of which you are a part in your respective countries.

The surveyors are known as tireless researchers, and they always need to have deep motivations to better serve the society in which they live. This is also the message that we want to come out starting from Madrid to reach all the peoples you represent today. Before the closing remarks and thanks, I inform you that the participants of the first three editions of this course (Rome 2006 and 2010, Athens 2011) are often in contact and form a group of other specializations on the matter.

I express the hope that at the end of this course you will be good friends and you will be part of the Young Surveyors Network of which Eva will inform you.

A special thank to the Spanish colleagues, in particular to Prof. Ana Belen Bello and to Pedro Ortiz, who supported us in the organization of the course and for the hospitality and to all professors of the course for the teaching and knowledge they will transmit to you. I hope as well that you will find time to enjoy the hospitality of this wonderful Country and its people.



PROGRAMME BOOK

5

SUNDAY 16TH

ARRIVAL OF PARTICIPANTS

MONDAY 17TH

MORNING

Opening ceremony with speeches by the Spanish authorities and persons present, President of CNGeGL, Geoweb, FIG Foundation, CLGE, EgoS, UMG, COITT, Spanish Authorities, etc.

» **OPEN CEREMONY LUNCH**
WITH AUTHORITIES

🕒 **OPENING CEREMONY > 10:30**

AFTERNOON

Topographical and geomatic surveys, with application of the various instruments and techniques

🕒 **15:00 - 16:30**

🗨️ **PROF. ARTURO ZAZO**

🕒 **16:30 - 16:45 COFFEE BREAK**

Production of orthoimage of big scale with the use of a simple digital camera on a UAV (Unarmed Aerial Vehicle) and applications

🕒 **16:45 - 18:15**

🗨️ **PROF. NIKOS ZACHARIAS**

TUESDAY 18TH

MORNING

GNSS surveys, data processing and transformation, for the preparation of new digital mapping, assessment of the precision of GNSS survey, necessary transformations between geodetic reference systems

🕒 9:00 - 13:00

🗣️ PROF. CELIK RAHMI NURHAN

☕ 10:30 - 10:45 COFFEE BREAK

AFTERNOON

Continuation of the morning lesson

🕒 15:00 - 18:00

🗣️ PROF. CELIK RAHMI NURHAN

☕ 16:30 - 16:45 COFFEE BREAK

WEDNESDAY 19TH

MORNING

Deformation of GNSS signals, atmospheric effects on RTK applications

🕒 9:00 - 11:00

🗣️ PROF. BIAGIO FORTE

☕ 11:00 - 11:15 COFFEE BREAK

Photogrammetric and LIDAR survey of artistic and heritage assets

🕒 11:15 - 13:15

🗣️ PROF. FULVIO RINAUDO

AFTERNOON

Photogrammetric and LIDAR survey and Laser Scanner and 3D photogrammetric survey of artistic and heritage assets and preparation for the technical excursion about the topic of the lesson

🕒 15:00 - 18:00

🗣️ PROF. FULVIO RINAUDO

🗣️ PROF. ANA BELÉN BELLO

☕ 16:30 - 16:45 COFFEE BREAK

THURSDAY 20TH

MORNING

Practical survey about photogrammetric and LIDAR survey and Laser Scanner and 3D photogrammetric survey of artistic and heritage assets

🕒 9:00 - 13:00

🗨️ PROF. ANA BELÉN BELLO

AFTERNOON

Results, discussions and comments on practical excursion of the morning

🕒 15:00 - 18:00

🗨️ PROF. ANA BELÉN BELLO

☕ 16:30 - 16:45 COFFEE BREAK

FRIDAY 21TH

MORNING

Photogrammetric and LIDAR survey

🕒 9:00 - 13:00

🗨️ PROF. DIEGO GONZALEZ
AGUILERA.

UNIVERSIDAD DE SALAMANCA

☕ 10:30 - 10:45 COFFEE BREAK

AFTERNOON

Methods, opportunities and results and experience of aerial surveys

🕒 15:00 - 18:00

🗨️ PROF. DIEGO GONZALEZ
AGUILERA.

UNIVERSIDAD DE SALAMANCA

☕ 16:30 - 16:45 COFFEE BREAK

SATURDAY 22TH

MORNING

Visit to the Royal Observatory Museum

🕒 9:00 - 13:00

🗨️ PROF. ANA BELÉN BELLO

SUNDAY 23TH

OPTIONAL TOUR: **TOLEDO** THE BEAUTIFUL IMPERIAL CITY-MUSEUM

The beautiful imperial city-museum of Toledo "World Heritage City" is located 70 km away from Madrid. It is one of the oldest towns in Europe, called "city of the three cultures", since Christians, Muslims and Jews lived together. Its genuine Spanish buildings include almost all the periods in the history (Arab, Gothic, Mudéjar, Renaissance and Baroque style). Here lived the great painter El Greco in the XVI century

» **PRICE PER PERSON**
FROM 50,00 €



MONDAY 24TH

MORNING

Geo-referencing of cadastral maps

🕒 9:00 - 11:00

🗣️ PROF. GIANNI ROSSI

🕒 11:00 - 11:15 COFFEE BREAK

EU Directive: Inspire (Infrastructure of Spatial Information in Europe) and SDI (Spatial Data Infrastructure)

🕒 11:15 - 13:15

🗣️ ALEJANDRO GUINEA

AFTERNOON

Preparation for the practical survey about GNSS survey

🕒 15:00 - 18:00

🗣️ PROF. ARTURO ZAZO

🕒 16:30 - 16:45 COFFEE BREAK

TUESDAY 25TH

MORNING

Practical Surveys about GNSS survey

🕒 9:00 - 13:00

🗣️ PROF. ARTURO ZAZO

AFTERNOON

Results, discussions and comments about the practical surveys of the morning

🕒 15:00 - 18:00

🗣️ PROF. ARTURO ZAZO

🕒 16:30 - 16:45 COFFEE BREAK

WEDNESDAY 26TH

MORNING

Remote Sensing, geographic information system (GIS) and (SIT), geo-referenced data survey

🕒 9:00 - 13:00

🗣️ PROF. ALEJANDRO GUINEA

🕒 10:30 - 10:45 COFFEE BREAK

AFTERNOON

Web GIS, delivery and publication of geographic data for social, urban and regional planning and management

🕒 15:00 - 18:00

🗣️ PROF. ALEJANDRO GUINEA

🕒 16:30 - 16:45 COFFEE BREAK

THURSDAY 27TH

MORNING

Structural monitoring and soil deformation survey, techniques, opportunities and results which may be obtained

🕒 9:00 - 13:00

🗣️ PROF. ALESSANDRO CAPRA

🕒 10:30 - 10:45 COFFEE BREAK

AFTERNOON

Cartography and cadastral maps, Spanish cadastral system, shapes, rights and taxation; updating and changes of data and database, storage and preservation

🕒 15:00 - 18:00

🗣️ PEDRO J. ORTIZ

🕒 16:30 - 16:45 COFFEE BREAK

THURSDAY 28TH

MORNING

Visit to the Spanish Land Agency

🕒 9:00 - 13:00

🗨️ PROF. PEDRO ORTIZ

AFTERNOON

Analysis and feedback on issues covered Meeting of guests, organisers and Spanish colleagues, with closing ceremony.

🕒 15:30

» CLOSING CEREMONY DINNER
WITH AUTHORITIES

🕒 20:00

SATURDAY 29TH

DEPARTURES OF PARTICIPANTS

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■ ZHANG	Jia	China
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KUZNETSOV	Andrey	Russian Federation
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KOTAR	Kotar	Slovenija
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