

XXVI FIG CONGRESS 2018

ISTANBUL, TURKEY
6-11 May 2018

*"Embracing our smart
world where the
continents connect:
enhancing the
geospatial maturity
of societies"*

FIG
2018
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Greetings from Chryssy Potsiou

Dear Colleagues,

Welcome to XXVI FIG Congress 2018.

In a world where demographics and urbanization are rapidly driving change, technology brings more automation to business and governments, Internet and the cloud enable a massive creation and consumption of geo-data, and the extended use of affordable smart devices allows us to reach out to people even in the most remote corners of the planet with information and services at high speed. Largely unheard a few years ago, the coming together of this new powerful and affordable technology (e.g., UAVs, smart phones and mobile apps, digital cameras, IoTs, blockchain, etc) with surveying is rapidly becoming central to the long-term strategy of governments as well as mapping agencies. Responsively, surveyors are taking a long, hard look at their role as “change agents for a global sustainable development” to ensure democratization and make digitalization a peaceful transition power for the benefit of all.

The theme of XXVI FIG Congress 2018, “Embracing our smart world where the continents connect: enhancing the geospatial maturity of societies,” has a clear technical focus to motivate surveyors to improve their qualifications for the “Geospatial Transformation of the World”. Surveyors care to provide reliable, appropriate and affordable data, tools and services timely to address among other societal disparities, digital transformation and decentralized business models, volatile economy, evolving new city design models and anthropogenic environmental damage. We offer our expertise to develop the profession and to create solutions to comfort those who feel helpless and marginalized when confronted with rapid economic and technological change; those who fear the loss of jobs and of tenure security; those who feel the growing need for more transparency, more safety, more environmental quality, more fairness, more education, more gender equality, and more efficiency in governance of urban and rural areas; and those in the low and middle classes who seek for more growth, for an economic freedom and for freedom from corruption.

FIG Congress seeks to offer the surveying community a 360° experience and knowledge sharing. This involves excessive commitment from our Local Organizers, FIG Council and Office, Commissions, Task Forces, Networks, Corporate members, Sponsors and Exhibitors, as

well as from the FIG Foundation, our national Member Associations, Academic and Affiliate members, keynote speakers and all presenters. We wish to extend our thanks and gratitude to all those in charge. This year, we are particularly proud to be hosting highly qualified keynote speakers who will present best practices from various organizations and from many parts of the world, and will challenge participants to pay attention to the expectations of the future generations.

A great variety of technical sessions and presentations are offered this year. We will be looking at urbanization and the management of land, the sea and the built environment. We will be considering opportunities and how new technologies and tools are accelerating the shift to digitalization and decentralization: by merging perception with reality; by revolutionizing the way people move and transport; by upgrading land administration systems into 3d cadasters and spatial data infrastructures; by standardizing our products and services; by ensuring sustainable urban-rural linkages, as well as land-sea seamless management; by developing fit-for-purpose procedures for formalizing and registering property rights, for zoning and permitting procedures, for property valuation and taxation models; and by supporting the development of sustainable and transparent property markets.

I am sure you will prioritize and enjoy the specially planned FIG sessions in partnership with UN Habitat GLTN, FAO and the WB, as well as our sponsors’ sessions and our Exhibition. And be sure not to miss the charity dance and our social events. Our Turkish organizers have done their best to organize a memorable and excellent event. We feel privileged to be hosted here and share their experience on the theme as well as to be updated on their professional achievements. Once more I want to thank them all for their continued support of FIG and for their generous hospitality. And what is most important: our Turkish colleagues are gracious people! You will definitely love being here and working with them.

Please take the opportunity to enjoy one of the most historic and well-known megacities of the world. Istanbul is a unique city and is always at its best in springtime.

On behalf of FIG Council and Office, for all of you and especially for our new-comers and young surveyors “a warm welcome to our FIG family”. You are a valued member of our community and I wish you a fruitful and enjoyable week in Istanbul.

Prof. Dr. Chryssy Potsiou, FIG President



Dear Colleagues and Friends,

The Turkish Chamber of Survey and Cadastre Engineers (CSCE) is proudly honoured to host the XXVI FIG Congress & General Assembly in Istanbul, Turkey, which will be held between 6 and 11 May 2018.

We are certain that Istanbul will be the host of an event that surely will exceed all the expectations of a memorable and successful Congress. We have been working hard to ensure a seamless organization of the congress since Turkey was announced as the winning country to host the FIG Congress in 2018. As the Organizing Committee, we are making every effort to meet your valuable expectations in Istanbul as this geographical area that stretches along the longitudes of Germany and Malaysia will hold its first FIG Congress.

CSCE has been an active member of the FIG since 1969. CSCE will now host the FIG Congress 2018 in order to provide a platform where countries and organizations can share their professional experiences, recently implemented projects, applied methods and up-to-date technologies. For raising a globe-wide awareness, disseminating information and promoting modern developments, the event will comprise organization of technical excursions as well as leisure trips for diversification purposes.



It is our great pleasure to welcome you to the largest and most prestigious conference of surveying professionals to be held in Istanbul/Turkey in 2018. Related national agencies, institutions, universities and professional bodies in Turkey are supporting the Congress.

As it is well known, Istanbul is a fascinating city with a rich history and culture and is the most populous city in Turkey. Approximately 20 million foreign visitors arrived in Istanbul in the first half of 2017. Sometimes it is hard to decide which continent it truly belongs to when you travel around in Istanbul. The Bosphorus Strait divides the two continents into what we refer to as “the Asian side” and “the European side.” In another saying, Istanbul connects the two continents in one city. Hence, the logo of FIG Congress 2018 emphasizes this fact and thus the theme and the logo are in well harmony with each other in this context.

The theme of FIG Congress 2018 “Embracing our smart world where the continents connect: enhancing the geospatial maturity of societies” finds its meaning in “Geospatial Transformation of the

Istanbul is one of the most impressive and attractive cities at the crossroads of Europe and Asia, where unique beauties of the West and the East are intertwined. In this city, people from various religions and cultures co-exist in peace and harmony. It is an open-air museum adorned with mosques, churches and synagogues along with palaces and ancient monuments. Besides, Istanbul is an ideal business and congress centre associated with advanced tourism and gastronomy activities where infrastructure and transportation facilities effectively serve for congress, exhibition and social events. People living in Istanbul will be very happy to show you the well-known Turkish hospitality. We strongly believe that Istanbul will provide a world class venue for the delegates to undergo a cultural, technical, professional and personal experiences through various activities, which will guarantee the success of the FIG Congress 2018.

We welcome you to Istanbul. We are certain that you will greatly enjoy this major scientific and social event of our profession as well as Turkish culture, cuisine and hospitality.

Mr. Ertugrul CANDAŞ

Past President, Turkish Chamber of Survey and Cadastre Engineers

World”. In order to be able to meet the expectations associated with the theme of the congress, plenary sessions and several relevant content-rich paper presentations covering future-positive insights will be realised. So, we are looking forward to a time of synergy and active interaction between speakers and participants.

During FIG Congress 2018; scientists, experts, researchers, public and private sector representatives active in the field of surveying will come together and share their knowledge, opinions and projects. In the Congress; along with keynote speakers, oral presentations, Reference Frames in Practice (RFIP) and Building Information Modelling (BIM) pre-events/workshops and also 4th FIG Young Surveyors Conference will be held with the participation of FIG members. Together with the trade fair and a combination of side events and social activities, the Congress will be of interest to participants from all over the world and will be a memorable experience not to be missed.

I hope you will find time to see Istanbul.

Dr. Orhan ERCAN, Co-Congress Director

Chair, Local Organising Committee / Co-Conference Director



Welcome to Istanbul -Welcome to the XXVI FIG Congress. Does it make sense to bring people from all the world together for a conference? Does it make sense to spend money on attending, on the travel, the time that is spent? Can't we just organise meetings through skype,

learn from the internet, follow webinars... Hey, we are in 2018.

Research has actually shown that distance matters... the further away people are from each other the less they produce together. You do not have to get far away. Working in the same office has shown high cooperation and productivity. If you work in different offices but on the same floor cooperation already decreases. Working in the same building but on different floors surprisingly enough causes a significant decrease of cooperation. And what does this have to do with a conference? It shows that distance matters. And that the value of meeting other people in person means a lot. Although today we have many smart, electronic options, it cannot replace presence – being together – networking – seeing each other – exchange views – generating new ideas – and maybe, who knows, find future partners for cooperation, idea exchange, benchmark, inspiration. You cannot obtain this through the internet in the same way. So – conferences matter! Conferences enrich your work when you are back home. With this I would like to welcome you to Istanbul, and to this grand congress. Take the opportunity to meet new people, talk to them – maybe you will find interesting future work partners and acquaintances from places you might never have dreamt of. Please enjoy the time here in Istanbul. The Local Organisers and FIG have put great effort in this Congress, and I hope that you will return home enriched, energized and with many new acquaintances – with whom you can continue a great online communication at a distance... Finally a big thanks to the Local Organisers, to all exhibitors, sponsors, partners, FIG Council, Commission Chairs and all other volunteers – and to all participants – without all of you this congress would never have become a reality.

Louise Friis-Hansen

FIG Director and Co-Conference Director

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International Federation of Surveyors FIG

FIG is the premier international organisation representing the interests of surveyors worldwide. It is a federation of the national member associations and covers the whole range of professional fields within the global surveying community, including surveying, cadastre, valuation, national mapping professionals, geodesy, geospatial experts and quantity surveyors.

FIG was founded in 1878 in Paris and was known as the Fédération Internationale des Géomètres. This has become anglicized to the International Federation of Surveyors. It is a UN-recognized non-government organisation (NGO), representing more than 120 countries throughout the world, and its aim is to ensure that the disciplines of surveying and all who practise them meet the needs of the markets and communities that they serve.

The FIG vision is of a modern and sustainable surveying profession in support of society, environment and economy by provid-

Turkish Chamber of Survey and Cadastre Engineers

The Turkish Chamber of Survey and Cadastre Engineers (CSCE) was founded in 1954 and has been a member of FIG since 1969. The Chamber headquarters is located in Ankara, connecting 10 Branches, 9 Regional Representations and 150 Provincial Representations in Turkey. Chamber has about 15,000 members which covers all FIG Commissions and has appointed a delegate to each Commission.

CSCE is a professional organization, whose main purpose is to protect the interests of both its members and the public.

According to the Constitution of the Republic of Turkey, membership is optional for individuals who work in public establishments and public economic enterprises. For all other engineers, Chamber membership is obligatory in order to practice in this profession.

Graduation from a 4-year program in the relevant department of university is a requisite for designation as Surveying Engineer. Two out of three members of the CSCE work in the private sector. There are approximately 3,500 surveying officers/companies in the country.

ing innovative, reliable and best practice solutions to our rapidly changing and complex world, acting with integrity and confidence about the usefulness of surveying, and translating these words into action.

FIG has been organising international surveying conferences since 1878. The first one was held in Paris 18–20 July when representatives of national surveying associations of six countries met to establish the organisation. This year's Working Week is the 79th major international surveying conference that FIG has organised.

FIG Council Members:

- President: Prof. Dr. **Chryssy Potsiou** (TEE and HARSE, Greece)
- Vice President: Prof. Dr. **Rudolf Staiger** (DVG, Germany)
- Vice President: Dr. **Diane Dumashie** (RICS, United Kingdom)
- Vice President: Dr. **Orhan Ercan** (CSCE, Turkey)
- Vice President: Mr. **Mikael Lilje** (SPBE, Sweden)

Conference Steering Committee

Prof. Dr. **Chryssy Potsiou**, President (FIG)

Mr. **Ertugrul Candaş**, Past President (CSCE)

Dr. **Orhan Ercan**, Co-Congress Director (CSCE)

Ms. **Louise Friis-Hansen**, Co-Conference Director (FIG)

Local Organising Committee

Dr. **Orhan Ercan** – Head of Local Organizing Committee

Prof. **Muzaffer Kahveci** – Member of Local Organizing Committee

Mr. **Muhittin Ipek** – Member of Local Organizing Committee

Mr. **Harun Resit Sever** – Member of Local Organizing Committee

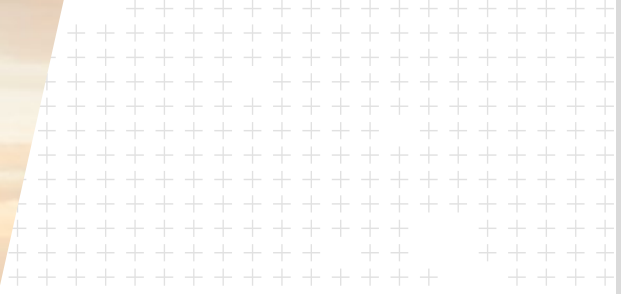
FIG Office

Ms. **Louise Friis-Hansen**, FIG Director and Co-Conference Director

Ms. **Claudia Stormoen Pedersen**, Conference Manager

Ms. **Maria Bargholz**, Finance and Administration

Ms. **Martine Eelderink**, FIG Assisting Event and Support Manager



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Registration And Conference Service

See open hours on page 10.

Badges

Each registrant will receive a name badge. This badge will be your official pass and must be worn at all times during conference hours when attending the congress.

Delegate/Young Surveyor pass: Includes admission to all technical sessions and exhibition, lunches, coffee breaks with refreshments on the four conference days, Welcome Reception, Opening Ceremony as well as the Farewell Reception.

Exhibitor: Includes access to the exhibition hall as well as lunches, coffee breaks with refreshments, Welcome Reception, Opening Ceremony and the Farewell Reception.

Accompanying Person: Welcome Reception and Opening Ceremony, as well as an exciting full day tour. See page 30.

Refreshments and Lunches

Refreshments will be served during the morning and afternoon breaks at coffee stations in the exhibition hall and in room BEYAZIT HALL. Lunches will also be served in the same place. Lunch and Coffees on 6 and 11 May are for General Assembly attendees.

Bag and Certificates

Each full delegate will receive a conference bag. Certificates of attendance and presentation will handed out at can be picked at the registration desk after 16:30 each day, on Friday from 09:00–16:00. Please note certificate of presentation can only be picked up on the day of presentation or later.

Speakers' Preparation Room

The speakers' preparation room is located in room YILDIZ 2. You are required to bring your PowerPoint presentation to the staff in the room for upload by 16:00 the day prior to your presentation. Your presentation will be on the laptop in the session room prior to your session. Please note that you cannot bring your presentation to the session room.

Computers will be available for last-minute adjustments to the presentation.

In order to allow the sessions to run smoothly and in fairness to other speakers, all presentations are expected to adhere strictly to the time allocated. Check the starting time for your presentation at www.fig.net/fig2018.

International Federation of Surveyors (FIG)

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Email: fig@fig.net

www.fig.net

Chamber of Surveying and Cadastre Engineers of Turkey

TMMOB Harita ve Kadastro Mühendisleri Odası

Sümer Sokak No: 12/10

Yenişehir, Kızılay

06440 Ankara

TURKEY

Conference Web Site and App

- Conference web site: fig.net/fig2018
- FIG Conference Web app: fig.net/app

Conference Proceedings

www.fig.net/fig2018/proceedings.htm and
FIG Conference Web App

Social Media



www.instagram.com/figsurveyors



www.facebook.com/international-federationofsurveyors



twitter.com/FIG_NEWS



www.linkedin.com/company/fig---international-federation-of-surveyors

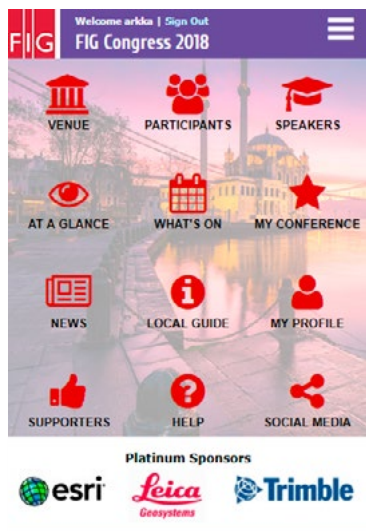
Wireless Internet

Wireless Internet is available at Istanbul Conference Center.

- Wifi name: FIG2018
- Password: ISTANBUL

Conference Web App

The free FIG Conference Web App at www.fig.net/app allows you to get the latest information about the programme. The FIG Conference Web App has everything you need to know about the conference... all conveniently accessed via Internet with your smart phone or tablet, or any other computer!



Some of the FIG 2018 app features include:

- Technical programme with abstract and paper PDFs
- List speakers and participants
- Create your own conference programme
- Exhibitor profiles & booth locations
- Conference stats

For detailed instructions, please visit fig.net/fig2018/app.htm.

CONGRESS THEME

The objective of the conference is to share experience and knowledge in the surveying profession among the various cultures and societies and to enhance the ability of all people and governments to use information and tools properly to optimize activities required to achieve the Sustainable Development Goals. The theme of FIG Congress 2018 is “Embracing our smart world where the continents connect: enhancing the geospatial maturity of societies” finds its meaning in the joint effort for the “Geospatial Transformation of the World”.

Previously there was a need for providing reliable, evidence-based open and free or low-cost data which describe a “spatially enabled” society. But today we realize that we have an additional task to ensure that these data and tools are used practically and intelligently by the society and governments and through that to ensure the transition from the stage of a “spatially enabled” society to the stage of a “spatially mature” society: a society that is able to use the available spatial information and tools in an easy and smart way in order to achieve sustainable prosperity for all.

This transition requires improved professional skills to handle the massive creation and consumption of geospatial data, extended use of affordable smart devices, increasingly high downloading speeds, the Internet of Things, cognitive computing for all to improve human decision-making, provision of personalized information and the Internet of Me. It is a well-known fact that location information has changed people’s perceptions. We cannot measure or monitor sustainability and growth without the intelligent use of evidence-based geospatial data. Technology helps us “uncover” the missing information and reduce inequalities. Therefore, we have to increase our skills as professionals.

Young Surveyors Conference – see fig.net/fig2018/youngsurveyors.htm

Reference Frame in Practice Seminar – see fig.net/fig2018/rfip.htm

BIM Workshop – see fig.net/fig2018/bim.htm

For FIG Sessions and Forums and FIG Partner Sessions, please see pages 24–25.

Time	Friday 4	Saturday 5	Sunday 6 May	Exhibition				Friday 11 May								
				Mon 10:30–17:30	Tue 10:30–17:30	Wed 10:30–17:30	Thu 10:30–17:30									
				Monday 7 May	Tuesday 8 May	Wednesday 9 May	Thursday 10 May									
8:00	Registration 7:30–17:30 Hilton	Registration 7:00–20:30	Registration 7:00–20:30	Registration 7:00–19:30 Newcomers Session	Registration 7:30–18:00	Registration 7:30–18:00	Registration 7:30–18:00	Registration 9:00–16:00								
9:00	REFERENCE FRAME IN PRACTICE SEMINAR	REFERENCE FRAME IN PRACTICE SEMINAR BIM WORKSHOP • YOUNG SURVEYORS CONFERENCE	General Assembly Part 1	BIM TECHNICAL TOUR • YOUNG SURVEYORS TOUR	Opening Ceremony	Plenary Session 2	Plenary Session 3	Plenary Session 4	FIG Presidents' Meeting							
10:00					Coffee / Tea	Coffee / Tea	Coffee / Tea	Coffee / Tea		Coffee / Tea	Coffee / Tea					
11:00					General Assembly Part 1 (cont.)	Plenary Session 1	Technical Sessions	Technical Sessions	Technical Sessions	Technical Sessions	General Assembly Part 2					
12:00												Lunch (Only for GA attendees)	Lunch	Lunch	Lunch	Lunch (Only for GA attendees)
13:00					General Assembly Part 1 (cont.)	Technical Sessions	Technical Sessions	Technical Sessions	Technical Sessions	Technical Sessions	General Assembly Part 2 (cont.)					
14:00												Coffee / Tea	Coffee / Tea	Coffee / Tea	Coffee / Tea	Farewell Ceremony
15:00												Technical Sessions	Technical Sessions	Technical Sessions	Technical Sessions / Festive closing of exhibition	
16:00						Charity Dance		FIG Commissions Annual Meetings								
17:00																
18:00																
19:00		Welcome Reception Hilton Bosphorus İstanbul – Pool Side	Traditional Turkish Evening/ FIG Foundation dinner Military Museum	Commission Dinners / Free evening	Gala Dinner Boat on Bosphorus											
20:00																
21:00–																

The FIG Congress 2018 will be held at Istanbul Congress Center, situated in the Congress Valley in Taksim-Nişantaşı district, the most elegant and central destination in Istanbul.



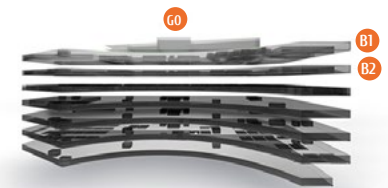
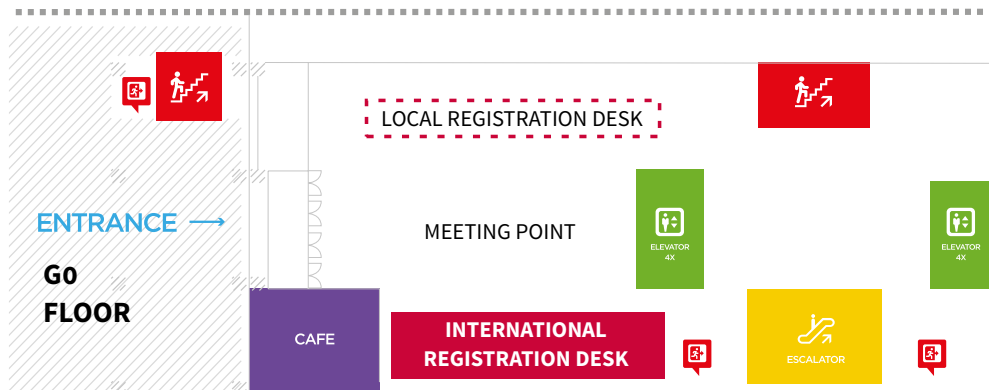
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 Tel. +90 (212) 373 99 00
 sales@iccistanbul.com
 www.iccistanbul.com

100 m	from Harbiye bus stop on the Taksim-Sisli line
500 m	from Taksim Metro Station linked to the city's new underground system

Registration Desk

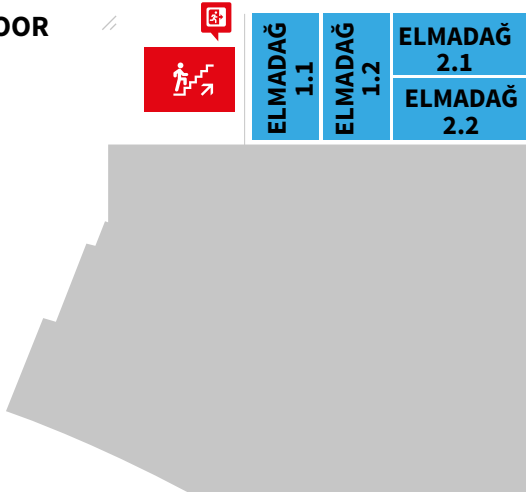
The FIG Registration desk is open as follows:

Fri 4 May 07:30–17:30 Hilton Bosphorus – Lobby	Tue 8 May 07:30–18:00 İstanbul Congress Center
Sat 5 May 07:30–17:30 Hilton Bosphorus–Lobby	Wed 9 May 07:30–18:00 İstanbul Congress Center
Sun 6 May 07:00–20:30 İstanbul Congress Center	Thu 10 May 07:30–18:00 İstanbul Congress Center
Mon 7 May 07:00–19:30 İstanbul Congress Center	Fri 11 May 09:00–16:00 İstanbul Congress Center



Note that G0 (entrance) is on the ground level and the other levels (B1 and B2) are below the ground.

B1 FLOOR

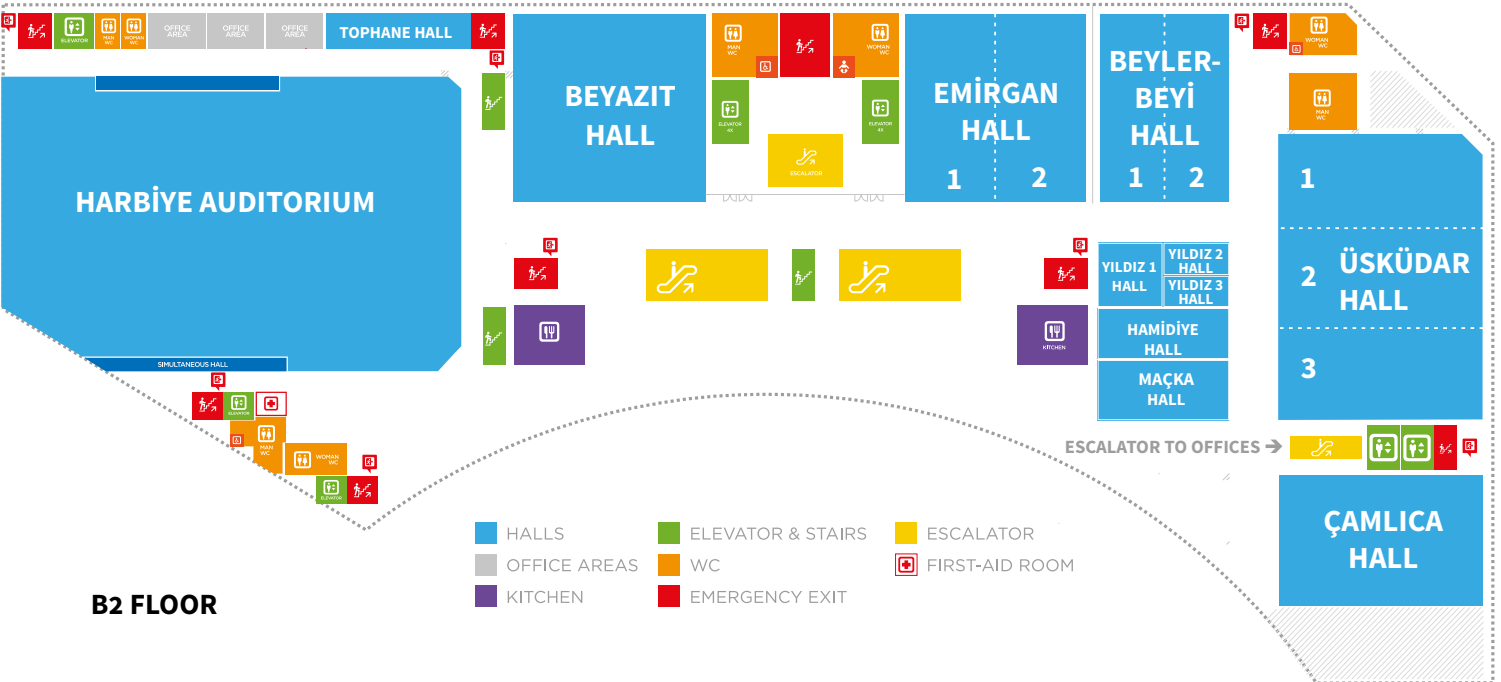


ELMADAĞ 1.1	LOC / CSCE Room
ELMADAĞ 1.2	FIG President Room
ELMADAĞ 2.1	FIG President Meeting Room
ELMADAĞ 2.2	FIG Office



HARBIYE AUDITORIUM	Opening Ceremony Plenary Session 1
EMİRGAN 1 & 2	Technical Sessions
BEYLERBEYİ 1 & 2	Technical Sessions
ÜSKÜDAR 1, 2 & 3	Plenary Sessions 2-4 Technical Sessions

ÇAMLICA	Technical Sessions
MAÇKA	Technical Sessions
HAMİDİYE	Technical Sessions
YILDIZ 2	Speakers' Preparation Room
YILDIZ 3	Meeting Room
YILDIZ 1	Meeting Room



■ HALLS	■ ELEVATOR & STAIRS	■ ESCALATOR
■ OFFICE AREAS	■ WC	■ FIRST-AID ROOM
■ KITCHEN	■ EMERGENCY EXIT	

B2 FLOOR



Monday 7 May at 9:00-10:30
HARBIYE Auditorium, Istanbul Congress Center

The opening ceremony will provide a spectacular introduction to the FIG Congress, its theme, and its unique location – a festive start of the week.

The FIG Congress 2018 will kick off with the Opening Ceremony, featuring messages and statements from the Presidents of FIG and the local host CSCE, as well as from high-level representatives from the Government of Turkey.

The exhibition will officially be opened by Prof. Dr. Chryssy Potsiou, FIG President and Orhan Ercan, Co-conference director.

KUZEYİN UŞAKLARI FOLK DANCE GROUP

In Black Sea Region, corn and the sea play an important role in the local economy and social life. Hamsi, a kind of anchovy lives in this region primarily and one of the most characteristic movements, in horon dances, is a fast shoulder shimmy and a trembling of the entire body, which imitates or suggests the movements of the hamsi as it swims in the sea or struggles in the nets for its life. It is a fantastic show that you cannot keep your eyes off the dancers.



LOC performing their interpretation of hamsi shake at the farewell of the Helsinki Conference...



The programme is underpinned by high-level presentations in four plenary sessions covering topics within the overall theme “Embracing our smart world where the continents connect: enhancing the geospatial maturity of societies”. These specially invited presenters set the agenda for each day, sharing insights into their own experience and pitfalls, as well as presenting their vision and predictions.

Plenary Session 1 – Urban Development

Monday 7 May at 11:00-12:30 in Harbiye Auditorium, Istanbul Congress Center



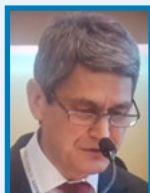
Prof. Dr. Chryssy Potsiou

FIG President

Achievements FIG 2015–2018

The presentation will provide an introduction to the theme of the XXVI FIG Congress 2018, the vision and mission of FIG, the work plan and the major FIG achievements during the 4-year administration. Included are examples of cooperation with the UN, the World Bank, sister associations and other professional associations; and recognition of FIG members, workshops, major events, research, publications and administration.

Prof. Dr. Chryssy Potsiou was elected President of FIG for a four-year term at the General Assembly in Kuala Lumpur. Since 1982 she is active in FIG. She was the Chair of FIG Commission 3 for the period 2006–2010 and the ACCO representative at the FIG Council for the periods 2006–2008 and 2008–2010. In 2011 she was elected as Vice President. Prof. Dr. Potsiou is teaching Cadastre and Land Management and Property Valuation at National Technical University of Athens, Greece. She has 34 years experience in education, training and international capacity building in land management and administration.



Prof. Ali Parsa

Professor of Real Estate,
Royal Agricultural University Cirencester

The Fourth Industrial Revolution and Impact on Urban Development: the Role of Real Estate

We are standing on the cusp of the Fourth Industrial Revolution. But what impact would this revolution have on the development of our cities? How can we embrace and deliver the future demand for residential, commercial, industrial, retail and leisure property? What would be the shape of our cities? This presentation will ex-

amine how different cities are rethinking their urban development strategies to embrace the Fourth Industrial Revolution. Furthermore it will postulate how the real estate industry could deliver the future cities utilising innovative technologies and financing methods.

Professor Ali Parsa joined the RAU in September 2012. His research is multi-disciplinary in nature but focuses primarily on emerging real estate markets, Shariah compliant real estate investment and the interface between urban planning and real estate markets, globalisation and urban development.



Mr. Mehmet Özhasaki

Minister of Environment and Urban Planning

Urbanization Policy and Urban Regeneration Projects in Turkey

Mehmet Özhasaki was elected Mayor of Kayseri Metropolitan City by winning the elections for the fifth time. From 2004 to 2011, he was

President of the Historical Towns Union and played a major role in the improvement of many historical sites throughout the country. He was elected as a Deputy on 2015. He has been working as Minister of Environment and Urbanism since 2016.

Plenary Session 2 – Modern Technology Usage for our Profession

Tuesday 8 May at 9:00-10:30 in Üsküdar Hall, Istanbul Congress Center



Dr. Juergen Dold

President, Hexagon Geosystems

Transformation through Digitalisation

We live in a world where we have digital resources and massive amounts of data stored in a vast reservoir of potential. The opportunities have never been more achievable for businesses to leverage what is digitised into new digitalised workflows that enable transformation. This presentation will focus on how new technologies are accelerating the shift to digitalisation, merging perception with reality into a digital real-

ity, and how the creation of these digital realities is enabling the future of a smart, connected world.

With close to 30 years of experience in the geospatial industry, Dr. Juergen Dold serves as Hexagon's Geosystems Division president. Previous to this role, Dold served in many positions within the organisation from product manager to division president. He also served as academic counsel and assistant professor at the Institute for Photogrammetry and Image Processing at the Technical University Braunschweig where he oversaw research and development for various projects. Dold holds a PHD in Engineering.



Mr. See Lian Ong

Chair, FIG Commission 10

ICMS – Global Consistency in Measurement and Reporting Construction Cost

Financing desperately-needed buildings and infrastructure including energy systems, railways, bridges, schools and hospitals can often be risky because infrastructure projects across the globe categorise and forecast the construction costs differently. Until now, it has been almost impossible for governments and investors to compare construction costs like with like. It is hard for them to know if public infrastructure projects

The new ICMS standard enables, for the first time, better comparison in order to improve investor confidence and attract more private sector funding.

Dr. Ong has an illustrious career spanning over 40 years in both the public and private sectors. Dr. Ong was the President of the Royal Institution of Surveyors Malaysia, RISM (2003–2004) and Chairman of Pacific Association of Quantity Surveyors (PAQS) (2003 to 2005. He was the 130th Global President of the Royal Institution of Chartered Surveyors, RICS (2011–2012). Currently he is the Chairman of FIG Commission for Construction Economics and Management (Commission 10). See Lian is also the elected Chairman of the Standard Setting Committee (SSC) for International Construction Measurement Standard (ICMS).



Mr. Charles K Toth

2nd Vice President, ISPRS

Smart Cities

The Smart City concept and initiatives aim to exploit the potential of state-of-the-art technologies to make urban life better, and to revolutionize the way people move in metropolises. Mobility plays an essential role to improve the daily life of city dwellers. This presentation offers an overview of the state-of-the-art in sensing with a focus on mobility in smart cities and autonomous/assisted vehicle technologies.

Charles K. Toth is a Research Professor in the Department of Civil, Environmental and Geodetic Engineering, The Ohio State University. His research interest and expertise cover broad areas of spatial information sciences and systems. He has published over 350 peer-reviewed journal and proceedings papers. Widely recognized in the international mapping community, he has held many senior leadership positions in national and international societies, and was the President of the American Society of Photogrammetry and Remote Sensing (ASPRS), and is currently ISPRS 2nd Vice-President.

Plenary Session 3 – Rural Development

Wednesday 9 May at 9:00–10:30 in Üsküdar Hall, Istanbul Congress Center



Dr. Michael Klaus

Director of the Hanns Seidel Foundation (HSS)

Rural Development for Achieving the Sustainable Development Goals: Fostering the Rural-Urban Interrelationship

Rural development is of particular importance in sustainable development goals, in part as in many developing countries over half the population live in rural areas. Achieving sustainable development goals, therefore will not be possible unless agricultural productivity and rural incomes increase. Many relationships exist between the urban and rural areas. These linkages are what drive economic, social and cultural transformations. Urban areas are

very important to rural areas and vis-à-vis. Many urban and rural problems, which stand in the way of sustainable development goals, are often linked to the relationship between urban and rural areas. Therefore, the strategies for rural and urban areas cannot be discussed as separate items. Rather, rural and urban development approaches should be built around the objective of fostering the rural-urban interrelationship.

Dr. Michael Klaus is the Director of the Hanns Seidel Foundation (HSS) Representative Office Shandong, P.R. China. He studied Geodesy at the Technical University of Munich and in 2003 he received a Doctoral Degree in sustainable land development. Since 2012 he is leading the Project “Development of Rural Areas in China” as a component of the “Regional Project China” of Hanns-Seidel Foundation.



Mr. Jawad Peikar

Chief Executive Officer, Afghanistan Independent Land Authority |ARAZI|GIRoA

Learning from Best Practices: Towards a Sustainable Land Administration System in Afghanistan

Land policy, new laws, the Land Governance Assessment Framework (LGAF) diagnostic study completed in 2016, land governance, the High Council on Land and “state to state cooperation” in land administration and some inputs from the Strategic Institutional Development Plan for Land Administration (IDPL) will be discussed.

Since May 2013, Mr. Jawad Peikar has been the Chief Executive Officer (CEO) for the Afghanistan Independent Land Authority (ARAZI), and based on a Presidential decree in June 2015 he has been re-appointed as the CEO of the Afghanistan Independent Land Authority (ARAZI). With establishment of High Council of Land and Water under leadership of H.E the President, Mohammad Ashraf Ghani, he has become member of the Council, and also manages the secretariat of the Council. Due to importance of land issues in the country, Mr. Peikar is a member of Cabinet of the Government of Islamic Republic of Afghanistan. Has worked both for national and international organizations within the country mostly at the managing and leadership positions. Mr. Peikar is a lawyer, educated in the US.



Prof. Dr. Mehmet Babaoğlu

Member of Parliament, Parliamentary Commissioner for Agriculture, Forestry and Rural Affairs

Approach for Accelerating Rural Development in Turkey

Correct planning of the rural is critical to achieve concrete results. Clearly the most important field of profession for ensuring the smooth implementation is topographic and cadastral engineering. It is observed that the field of topography and cadastral survey is the starting point for planning works, which require an interdisciplinary effort.

Prof. Dr. Mehmet Babaoğlu graduated from Ege University Agricultural Faculty. He had his master's degree from the Selçuk University Institute of Science and a Ph.D. in Agricultural Biotechnology from the University of Nottingham, UK. He was a lecturer at Selçuk University Faculty of Agriculture. He was also founder Rector of Karatay University and founding president of Ministry of Development Konya (KOP) Regional Development Administration. He was elected as member of parliament in Konya during the 25-26 period. He is the head of Agriculture, Forestry and Rural Affairs Commission in Grand Assembly.

Plenary Session 4 – Spatially Enabled Societies

Thursday 10 May at 9:00-10:30 in Üsküdar Hall, Istanbul Congress Center



Dr. Mika-Petteri Törhönen

World Bank

Investing in Fundamental Infrastructure for Spatially Enabled Societies

The talk will center on the status and trends on Fundamental Infrastructure Investments for Spatially Enabled Societies in developing, transitional and middle-income countries that the World Bank collaborates with in securing equitable land



Prof. Abbas Rajabifard

UN-GGIM Academic Network, Head of Department of Infrastructure Engineering Director

Spatially Enabled Societies

The concept of spatially enabled societies (SES) involves establishing an infrastructure that facilitates the use of geographic location to organise information about the activities of citizens, businesses, government actions, decision-making processes and policies. In the era of hyper-connected societies where people, businesses and governments are connected across different locations, the integration of such an infrastructure would allow government information and services, business transactions



Dr. Victor Khoo

Senior Deputy Director, Singapore Land Authority (SLA)

Towards a Spatially Enabled Smart Nation

The sustainable, resilient and smart Cities of the Future will be powered by the effective use of technologies and innovative exploitation of data to improve the lives of its inhabitants and communities. Singapore's vision to become a Smart Nation requires high quality, high resolution and reliable data. Hence, comprehensive geoinformation and operational geo-reference infrastructure are critical components in this development. Singapore Land Authority's (SLA) scope of work includes the approval of cadastral survey, updating of ownership information, mainte-

rights for men and women, improving land governance, and establishing and modernizing land administration systems and geospatial services.

Dr. Mika-Petteri Törhönen is a land surveyor and Lead Land Administration Specialist at the World Bank's Land and Geospatial Unit. He leads land administration investment development and implementation globally, and oversees analytical work and technical assistance on land administration and geospatial infrastructure. He has a Doctor of Science degree from the Aalto University in Helsinki.

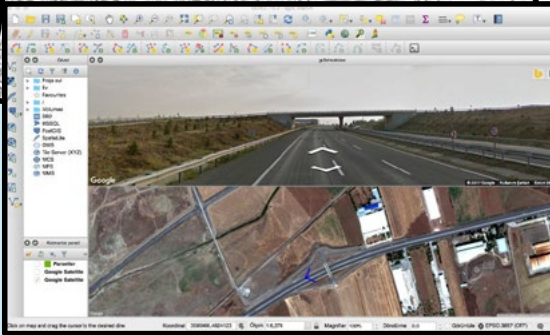
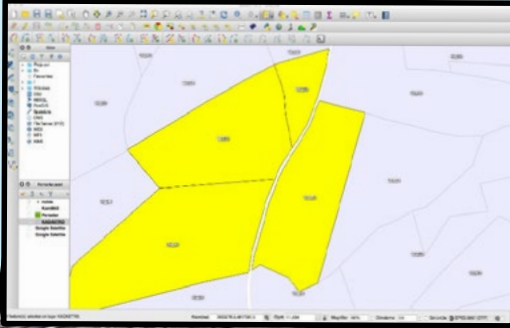
and community activities to be linked to locations. Linking data to location and subsequently, spatially enabling societies will, therefore, develop smart communities that efficiently address social, economic, and environmental challenges pertinent to their specific location.

Prof. Abbas Rajabifard Chair of the United Nations Global Geospatial Information Management Academic Network, which is a strategic research and training arm for member states to address UN Sustainable Development Goals (SDGs). Abbas has spent his career researching, developing, applying and teaching SDI, land administration and spatial enablement and strategies to deliver benefits to both governments and wider society. He has widely consulted and published in these areas.

nance of geodetic and GNSS infrastructure, topographic mapping and operation of Spatial Data Infrastructure (SDI). This presentation highlights the role of geoinformation and geo-reference infrastructure in the development of a Smart Nation.

Dr. Victor Khoo is the Senior Deputy Director in Land Survey Division of Singapore Land Authority (SLA). He received his Ph.D. and Master of Engineering degree from Nanyang Technological University (NTU), Singapore. Victor is also a Registered Surveyor. He works in diverse geospatial and mapping related subjects that encompass the collection, management and dissemination of geospatial and mapping information. His specific areas of interest include Differential GNSS, Cadastral Surveying, 3D Mapping and Spatial Data Infrastructure.

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A number of attractive and informative Technical Tours have been organised to complement the conference experience. These tours will visit sites and organisations of particular interest to delegates. The Meeting Point will be located at the registration desk. Meeting time 10 minutes prior to departure time. Tickets may be available for purchase (35 EUR) from the Registration Desk.

Tuesday May 8

TT1 – Kadiköy Directorship of Land Registry and Cadastre (TKGM)

Time: 09:00-12:30

TKGM is responsible for ensuring reliable record of land register which is under the responsibility of the state on a regular basis, to perform all kinds of contractual and non-contractual transactions related to land registry and register of immovable properties, conducting the country's cadastral survey, to follow the changes, to ensure renewal and updating of land plans and to carry out the related control and auditing services, have carried out services of geodetic infrastructure, aerial photography etc.

TT2 – Gaziosmanpaşa Municipality Urban Regeneration Project

Time: 13:30-17:30

Urban Regeneration projects are being conducted in order to renew the earthquake-prone buildings and ensure that citizens move to safe buildings as soon as possible. The projects aim to transform excessive and unhealthy residential areas with no economic life left and improve substandard urban reinforcement areas.

Wednesday May 9

TT3 – Technical Tour for Mass Valuation Pilot Studies to the Fatih Municipality

Time: 09:00-12:30

This technical tour will provide an opportunity to see each phase of the whole mass valuation pilot study in Fatih from deciding the pilot areas and data sources to data collection and model building processes.

TT4 – Valley of Life

Time: 13:30-17:30

Valley of Life (Yaşam Vadisi) is a public park project aiming to connect Beylikdüzü's north and south parts. During the tour, you will experience the largest green area Yaşam Vadisi which connects E-5 Highway and the shore. You will be seeing pedestrian ways, bicycle routes, theme parks, playing grounds for children, restaurants and cafes, grass amphitheatre, square and areas for social and cultural activities. The park is approx.. 1.000.000 sqm.

Thursday May 10

TT5 – Earthquake Research Institute (KOERI)

Time: 09:00-12:30

KOERI is encompassing earthquakes observation, research, education and application services within a single, integrated body. Established 150 years ago in 1868 and through the 1980's KOERI has evolved into a multidisciplinary research organization.

TT6 – Research and Application Center for Satellite Communications and Remote Sensing (TITU-CSCRS)

Time: 13:30-17:30

TITU-CSCRS is one of the forecoming institutions around the world with a highly capable ground receiving station unit and is the first ground receiving station in Turkey. It is also the first center and satellite ground receiving station established in Turkey to conduct application oriented projects in remote sensing and satellite communications technologies.

FIG Congress is much more than a conference with technical sessions. FIG Congress is also administrative and organisational meetings, forums and sessions, pre-events, and special sessions with partners.

Pre-Conference Events	Date	Time	Location
FIG Young Surveyors European Meeting	5-6 May	09:00-18:00	Ballroom / Hilton – see fig.net/fig2018/youngsurveyors.htm
Reference Frames In Practice Seminar	4-5 May	09:00-17:30	Şadırvan A / Hilton – see fig.net/fig2018/rfip.htm
BIM for Surveyors Workshop	5-6 May	09:00-18:00	Şadırvan B / Hilton – see fig.net/fig2018/bim.htm
EGoS General Assembly	9 May	09:00-17:15	Emirgan 1
Use and Application of STDM	10 May	09:00-12:30	Emirgan 2
STDM Code Sprint	10 May	14:00-17:30	Emirgan 2

FIG Sessions	Date	Time	Location
General Assembly – Session 1	6 May	09:00-16:30	ÜSKÜDAR
Newcomers session – introduction to FIG Congress	7 May	08:00-08:45	EMİRGAN 2
FIG Regional Capacity Development Network – Asia/Pacific	7 May	16:00-17:30	EMİRGAN 1
FIG Regional Capacity Development Network – Africa	8 May	07:45-08:45	MAÇKA
FIG Member Associations Forum	8 May	11:00-12:30	ÇAMLICA
FIG Director Generals Forum	8 May	11:00-12:30	BEYLERBEYİ 2
FIG YSN: The future of our Network	8 May	11:00-12:30	EMİRGAN 2
FIG YSN and OSM – Mapping	8 May	14:00-15:30	EMİRGAN 2
FIG Standards Network Session	8 May	14:00-15:30	EMİRGAN 1
FIG Corporate Members Meeting	8 May	16:00-17:30	YILDIZ 3
Annual Meetings of FIG Commissions. Open for all interested. After the meeting each commission organises a dinner (self-paid).	8 May	17:30-18:30	Varied
History Session 1 – Flying High Over the Ancient World	9 May	11:00-12:30	EMİRGAN 1
History Session 2 – Medieval Measurements in the Cadastres of Antiquity	9 May	14:00-15:30	EMİRGAN 1
FIG YSN Mentoring Toolkit	9 May	16:00-17:30	EMİRGAN 2
Regional Bodies Forum	9 May	16:00-17:30	BEYLERBEYİ 2
FIG Academic Forum on VGGT (FAO & FIG)	10 May	11:00-12:30	HAMİDİYE
FIG Presidents' Meeting	11 May	08:30-10:30	BEYLERBEYİ 1-2
General Assembly – Session 2	11 May	11:00-15:00	ÜSKÜDAR

FIG Sessions with Partners	Date	Time	Location
High Level Session Volunteer Community Surveyor Program (VCSP) (UN-Habitat GLTN & FIG YSN)	7 May	14:00–15:30	ÜSKÜDAR 3
Country to Country: Partnerships to Support Land Administration System Investment (World Bank & FIG)	7 May	14:00–15:30	MAÇKA
Volunteer Community Surveyor Program (VCSP) Roundtable (UN-Habitat GLTN & FIG YSN)	7 May	16:00–17:30	ÜSKÜDAR 3
Fit-for-Purpose Land Administration (UN-Habitat/GLTN, Kadaster and FIG)	8 May	14:00–15:30	BEYLERBEYİ 2
Achieving the Successful Introduction of Value-based Property Taxes (World Bank & FIG)	8 May	14:00–15:30	ÇAMLICA
Social Tenure Domain Model – Development and Application (FIG YSN & UN-Habitat GLTN)	9 May	11:00–12:30	BEYLERBEYİ 2
Best Practice for Land Consolidation Legislation in Line with VGGT (FAO & FIG)	9 May	11:00–12:30	EMİRGAN 2
Round Table on Securing Tenure Rights, Surveying and the VGGT (FAO & FIG)	9 May	14:00–15:30	EMİRGAN 2
Land Tenure, Climate Vulnerability and Adaptive Capacity (UN-Habitat/GLTN, RMIT and FIG)	9 May	14:00–15:30	ÇAMLICA
Launch of ‘Valuation of Unregistered Lands: A Policy Guide’ (UN-Habitat, FIG and RICS)	9 May	16:00–17:30	ÇAMLICA
Round Table on Property for Women in Muslim Countries (UN-Habitat GLTN & FIG)	10 May	14:00–15:30	MACKA

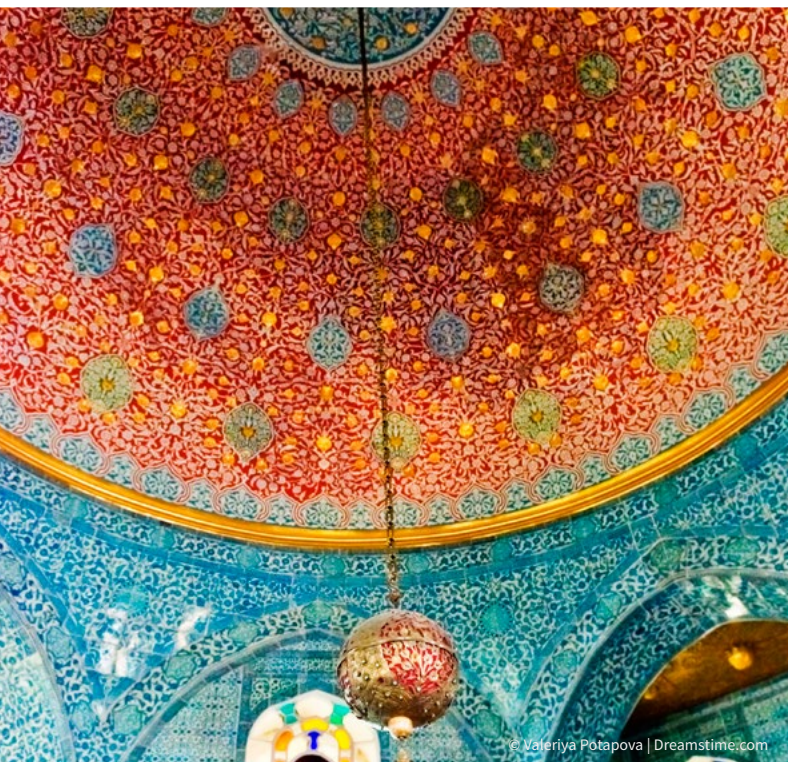
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Social Programme

FIG Congress would not be anything without the interaction and networking of our participants. Join these events to get to know your fellow peers.

Event	Date	Time	Location	Details
Charity Dance	6 May	17:00-18:00	Hilton Bosphorus Istanbul – Ballroom	Donate 10 EUR and dance for charity
Welcome Reception	6 May	19:00–20:30	Hilton Bosphorus Istanbul – Pool Side	All participants are invited. Dress code: Smart Casual
Traditional Turkish Evening – FIG Foundation Dinner	7 May	19:00–00:00	Military Museum	Tickets: 90 EUR *) Meeting point: Lobby of ICC Dress code: Informal
FIG Commission Dinners	8 May		To be decided by each Commission – check www.fig.net/fig2018	Individual payment
Gala Dinner	9 May	19:00–00:00	Boat on Bosphorus	Tickets: 110 EUR *) Meeting point: Lobby of ICC Dress code: Formal (Note though that comfortable shoes are good option for your healthy & safety on the boat.)
Farewell Reception	11 May	15:00–16:00	Istanbul Congress Center – B2 Floor Foyer	All participants are invited. Hosted by FIG Working Week 2019, Hanoi, Vietnam

*) Limited number of tickets will be available on registration desk.

Social Tours

The following social tours will be offered for participating delegates and accompanying persons:

Event	Date	Time	Cost (€)
Istanbul Classics – Half Day Afternoon	9 May	13:30–18:00	50
Troy & Gallipoli (ANZACS)	12 May	05:00–00:00	150

Tours will depart from Istanbul Congress Center.

Limited number of tickets will be available on registration desk.



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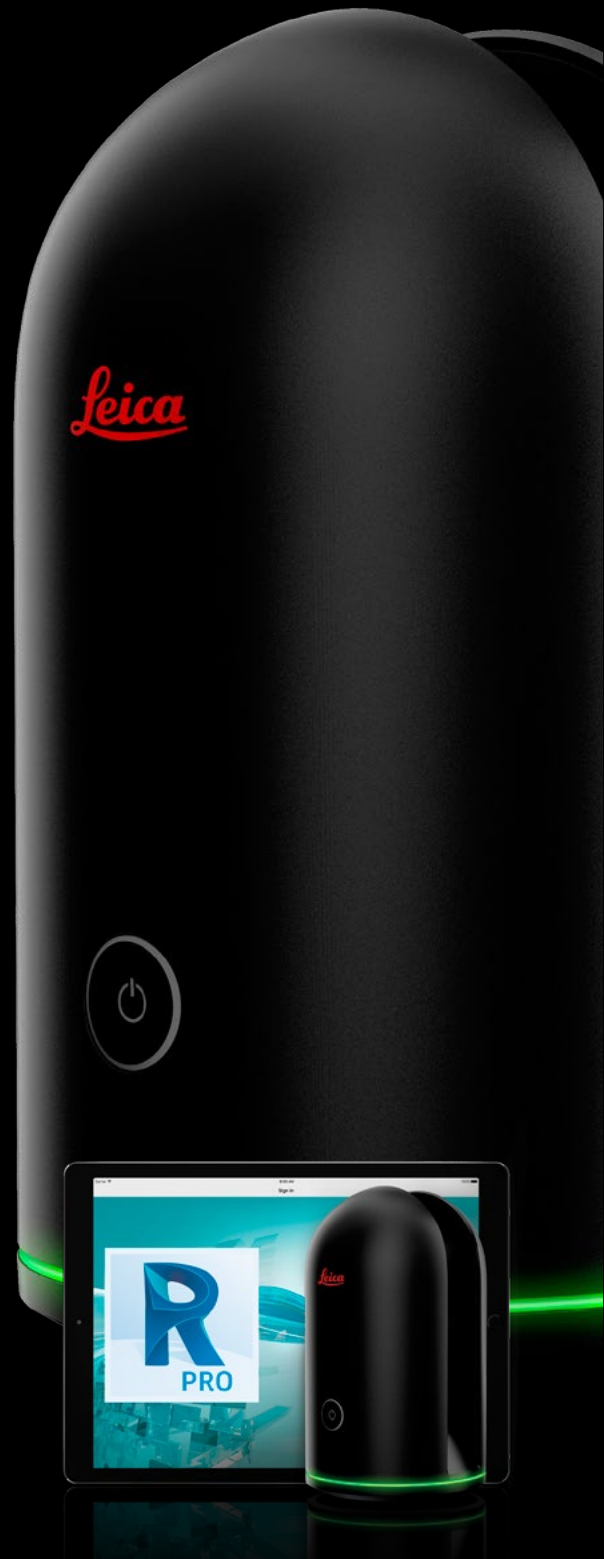
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Registered accompanying person for the FIG Congress are invited to attend the **Welcome Reception and Opening Ceremony**. An exciting day trip has been organised **Wednesday 9 May**. Meet at the registration desk at **9:30**. Tour ends approximately at **17:00**. Lunch is included.

The tour will bring you through the “Sultan Ahmet Center”, the heart of the “Old City” from where the Byzantine and Ottoman Empires were ruled.

Start from a visit at the **Hagia Sophia**, the Church of Divine Wisdom, one of the greatest marvels of architecture, constructed as a basilica in the 6th century by Emperor Justinian. Right in front of the church you’ll get the chance to see also the **Blue Mosque**, famous with its blue İznik tiles and unique with 6 minarets, built in the name of Sultan Ahmet.

Afterwards the tour continues at the **Hippodrome**, center of sportive events (chariot races, athletics) and political activities of the old city. center of sportive events (chariot races, athletics) and political activities of the old city. Take a look at the beautiful monuments decorating the Hippodrome; such as the Serpentine Column, Obelisk of Theodosius and German Fountain of Wilhelm II.

Afterwards you will take a stroll through the , where the most attractive shopping center and the biggest “souk” in the world can be found. There is enjoy nearly 4000 shops selling antiques, jewellery, gold, carpets, leatherware and souvenir.

The lunch will be served at a Turkish Restaurant.

The tour continues at **Topkapı Palace**, residence of Ottoman Sultans exhibiting imperial treasury, sacred Islamic relics of Prophet Mohammed, kitchen, Chinese porcelain, weapons, calligraphy section etc. Live guide commentary is not allowed in special sections. (Harem is not included in the program).

The tour will end at the **Sultan Tombs**, there are five tombs of Ottoman Sultans within the graveyard at Hagia Sophia. The ceramic panels are the most beautiful examples of the 16th century with purple, red, green and blue flower motives. Prince robes and a small piece from the Kaaba covers are displayed on the sarcophaguses.



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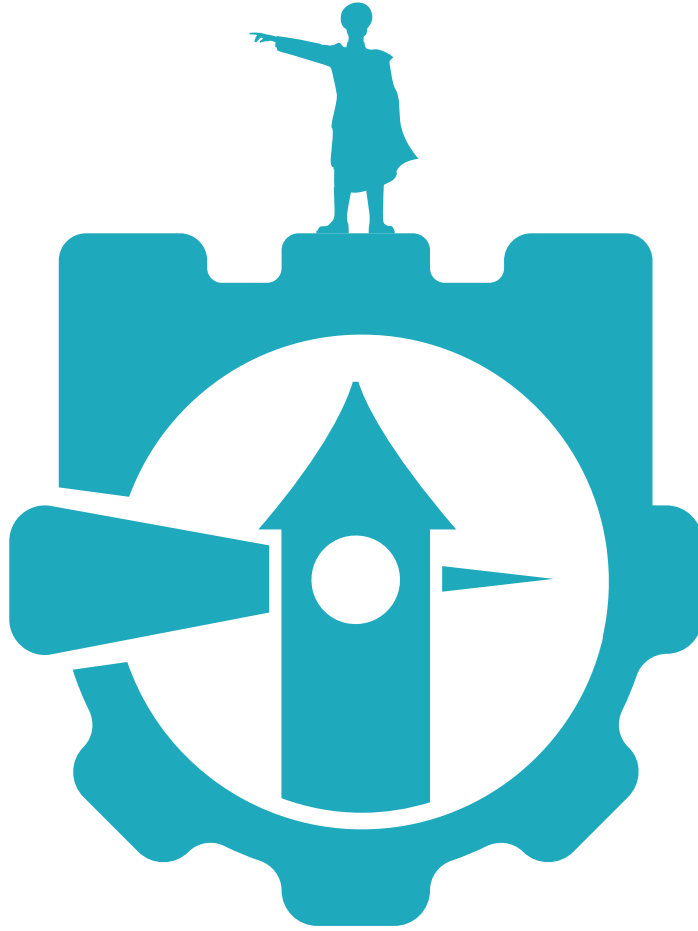
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Opening Hours

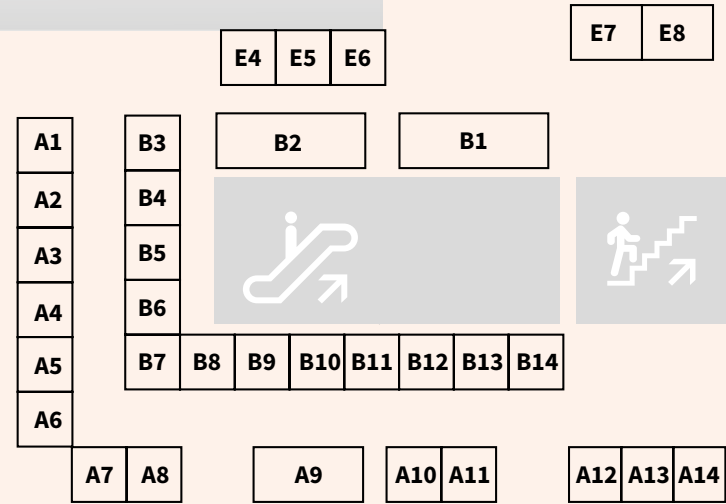
The exhibition is open from Monday to Thursday at 10:30–17:30. Wednesday 9 May from 15:30–17:30 the exhibition is open for the public.




























Stage at Exhibition

A platform within the exhibition is allocated for technical/product presentation and briefing or launching:

	May 7	May 8	May 9
11:30–12:15		Delair	Beylikdüzü
12:30–13:15	Esri	Trimble	Leica
13:30–14:15	Leica	Esri	Trimble

BEYAZIT HALL



	EMI Grup	A1		Geomatik Hizmetler	A15–A16		ChinterGEO	B9
	NSPS	A2–A3		Spatineo	A18		Beylikdüzü	B10
	FIG WW 2019, Hanoi	A4		Geozone AG	A19		Baytekin	B11
	FIG WW 2020, Amsterdam	A5		Vexcel Imaging	A20		Bimtaş	B12–13
	Geoteknik	A6–A8		Leica	B1		Delair	B14
	HKMO	A9		Esri	B2		Trimble	C1
	FIG	A10		Riegl	B3		TKGM	C2
	Nubigon	A11		Topcon	B4–B6		Harmiad / SEBA	C3–C5
	Hi-Target	A12–A14		China Star	B7–B8		ComNav	C6–C7

EMİRGAN HALL

BEYLERBEYİ HALL

E11

E12

E13

E14

ÜSKÜDAR HALL

E9 E10

C1

C2

C3

C4

C5

C6

D7

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YILDIZ 1
HALL

YILDIZ 2
HALL

YILDIZ 3
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HAMİDİYE
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A18 A19

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Birlik Mapping

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Kocaeli Büyükşehir Belediyesi

Kocaeli Metrop.
Municipality

D8

TURKSAT

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EMİ GRUP**A1**

Emi Grup Bilgi Teknolojileri A.Ş
 Photogrammetry: Aerial, Oblique, Terrestrial
 Lidar: Airborne; Mobil, Terrestrial
 Information Systems: Arc-EMI
 Energy Systems
 Geodesy Works
 Airborn Corona Systems: İnfrared Cam, Ultraviolet Cam, Frame Cam, Hd Cam, Lazer Measurement

NSPS**A2-3**

The National Society of Professional Surveyors (NSPS) is the United States of America FIG Member Association representing the surveying profession in the USA. 2022 is 20 years since the successful 2002 FIG Congress held in Washington, DC with 5000+ attendees. We aim to have an equally successful Congress in 2022 and ask for your support.
 The NSPS bid to host the 2022 FIG Congress in Orlando, Florida is supported by the surveying associations of the Western Hemisphere: AAGS, APPAT, CIG, PLC.

FIG WORKING WEEK 2019, HANOI**A4**

Vietnam Association of Geodesy, Cartography and Remote Sensing (VGCR) looks forward to welcome you to FIG Working Week 2019 in Hanoi, Vietnam from 22–26 April. The theme of the week will be: “Geospatial information for a smarter life and environmental resilience”

FIG WORKING WEEK 2020, AMSTERDAM**A5**

Being small sized, densely populated, partly below sea level and the second exporter of agricultural goods in world, the management of land and water is crucial in our society, where every m2 has been used. Mapping and surveying are basic activities to support this management. Having hundreds of years of experience with mapping and land consolidation, the Netherlands offers an inspiring environment for the FIG Working Week 2020, which is themed ‘Smart Surveyors for Land and Water Management’.

GEOTEKNİK**A6-8**

Our company established in 1995 in İstanbul for the purpose of operating in the surveying measurement equipment sector, provides sales, after sales support and training services of equipment and accessories of such devices as Total Station, GNSS, UAV, Theodolite, Cors station, Automatic level etc.

**HKMO****A9****INTERNATIONAL FEDERATION OF SURVEYORS****A10****NUBİGON****A11**

NUBİGON yazılımı, geliştirdiğimiz ilk gerçeklik modelleme çözümdür. Mimarlar, mühendisler ve arkeologlar, lazer tarayıcı verileri kullanarak mevcut kapalı alanların, binaların ve daha büyük tesislerin yüksek çözünürlüklü 3D modellerini üretmelerini sağlar. Verimli veri işleme, gerçek zamanlı HD görselleştirme ve kullanıcı dostu CAD araçları ile karakterizedir. Sonuç olarak,

NUBİGON, mevcut gerçeklik modelleme ürünlerine yenilikçi ve ekonomik bir alternatif haline gelmiştir.

HI-TARGET**A12-14**

Hi-Target is a professional surveying and mapping instrument manufacturer and solution provider from China. Areas of business range from land surveying, hydro graphic surveying and airborne surveying system to integrated solution. With intensive capital investment in R&D, Hi-Target has built a strong R&D team to support the development of top-quality products and it has collaborated with more than 10 prestigious universities in technological surveying research.

GEOMATİK HİZMETLER**A15-16****SPATİNEO****A18**

Spatineo is the impact assessment and quality assurance expert for spatial data infrastructures. Our goal is to make SDIs widely used and reliable for organisations such as cadastral/land registry, mapping, environmental, natural resources and transportation, regions and municipalities.

GEOZONE AG**A19**

Geozone is a distributor and manufacturer of surveying, mapping and UAV products. We distribute and produce the following brands and products Kaarta LIDAR/Scanners, Navcom StarFire GNSS and Falcon SF GNSS with StarFire technology.

VEXCEL IMAGING**A20**

Vexcel Imaging, based in Austria, taps into more than two decades of photogrammetry expertise offering state-of-the-art digital aerial and terrestrial sensor systems based on the latest and most-advanced technology. The system family is complemented by the fully integrated processing software UltraMap delivering exceptional quality point clouds, DSMs and ortho imagery.

LEICA**B1**

Revolutionising the world of measurement and survey for nearly 200 years, Leica Geosystems is the industry leader in measurement and information technologies. With a wide portfolio of innovative geospatial solutions and services, they deliver value every day to those shaping the future of our world. Leica Geosystems is part of Hexagon, a leading global provider of information technology solutions that drive productivity and quality across geospatial and industrial landscapes.

ESRI**B2**

Esri applies The Science of Where to unlock data's full potential in every organization. We continue to pioneer real-world problem solving using geographic information systems (GIS). Our mapping and analytics connect everyone, everywhere through a common visual language that inspires positive change in industry and society. Using this powerful platform to reveal deeper insights in their data, Esri users are creating the maps that run the world.

THE NEW CENTER OF CULTURE AND ART IN OPEN AIR

VALLEY OF LIFE



Valley of Life is Istanbul's greenest, most enjoyable, largest urban park. Valley of Life, stretching as far as the eye can see in the center of Beylikdüzü, presents a wonderful harmony of nature and culture by providing numerous opportunities.

*I invite all of our beloved citizens to join us on the cultural and art events taking place in **Valley of Life** which is also deemed worthy of **2017 Golden Ant Municipal Awards**. Come and enjoy the green, blue, culture and art in Valley of Life.*

Ekrem İmamoğlu

Mayor of Beylikdüzü Municipality

BEYLİKDÜZÜ



BELEDİYESİ

TOPCON**B4-6**

Topcon Positioning Group is headquartered in Livermore, California, U.S. (topconpositioning.com). Its European head office is in Capelle a/d IJssel, the Netherlands. Topcon Positioning Group designs, manufactures and distributes precision measurement and workflow solutions for the global construction, geospatial and agriculture markets. Its brands include Topcon, Sokkia, Tierra, Digi-Star, RDS Technology, and NORAC. Topcon Corporation (topcon.com), founded in 1932, is traded on the Tokyo Stock E

CHINA STAR**B7-8**

Beijing China star Science&Technology Co., Ltd was established in 2005. The company registered capital is 10 million RMB. Its main scope of business are products of aerial photography and surveying and mapping, such as UAV, aeroboat, delta wing and close shot surveying and mapping products (measurable camera, 360°panoramic camera) and satellite remote sensing data and maps of various scales, DOM. It provides with the most advanced foreign technology and quality products and services, etc.,

CHINTERGEO**B9**

CHINTERGEO, in recent 20 years, as China's largest and one of the world's famous surveying and mapping instrument exhibition, the annual exhibition records the progress of surveying and mapping technology, witnesses the historical changes of surveying and mapping industry.

BEYLIKDÜZÜ**B10**

Beylikduzu is one of the thirty-nine districts, located in the western part of Istanbul with a population of 320.000. Beylikduzu, matches the European cities with its high green space which is over 10 m² per person. One of the largest botanical parks of Istanbul, called as "Valley of Life" has been built in 2017 and has been receiving a tremendous attention from both the local community and abroad ever since. Today, Beylikduzu Municipality is carefully planning its future with a Vision 2030 agenda to become a more sustainable & creative eco-smart city.

BAYTEKİN**B11**

Baytekin Technical Company is work with technology since it was founded at 1977. The Company has distributorship with PENTAX, GARMIN, GEO FENNEL, SANDING and many more partners who are following and supporting Surveying, Lidar Technologies, Construction, Geology, Forestry and Mining sectors.

BİMTAŞ**B12-13**

BİMTAS has the feature of being the only center in Turkey providing service in 3D mapping and generating city model at different levels by airborne laser scanning. The company is also dealing with the smart city applications and aims to generate 3D GIS platform for Istanbul to integrate and visualize the databases of municipal functionalities like underground metro system and natural gas services etc.

DELAIR**B14**

Delair is a leading provider of drone-based solutions that enable enterprises to monitor and digitize their physical assets from the air and turn the collected data into valuable business insights. Its solutions are used globally by

customers in industries such as utilities, construction, agriculture, transportation, mining and oil & gas.

TRIMBLE**C1**

Trimble is transforming the way surveying work is done through the application of innovative technologies. Trimble solutions allow customers to collect, share and deliver complex information faster and easier, making them significantly more productive. Using Trimble solutions, organizations can capture the most accurate spatial data and transform it into intelligence to deliver increased productivity and improved decision-making.

TKGM**C2**

Historical origins of land registry and cadastre organization is dated back to Ottoman Empire times. General Directorate of Land Registry and Cadastre with its 172 years of history is the only responsible institution for land registry and cadastre activities in Turkey. General Directorate performs its activities with its 18.000 staff in all 81 cities across the country. GDLC continues to improve its service quality and capabilities with new projects, and to share its knowledge and experiences with other countries.

HARMİAD / SEBA**C3-5**

The Surveying Engineers Businessmen Association (HARMİAD) is an association founded in 2014 with the participation of 33 companies with over thirty years of experience.

HARMİAD member companies have wide capacity for Land Arrangement and Consolidation, Expropriation, Real Estate Development, Orthophoto Production, Cadastral Works, Topographical work for Pipelines, Roads, Railways, Dam and Energy Systems, GPS/GIS, etc.

COMNAV**C6-7**

ComNav Technology Ltd. develops and manufactures multi-constellation, multi-frequency GNSS measurement engine boards and receivers for ultimate high precision positioning applications. It is the very first Chinese company to develop, design and produce combined GNSS boards. With its fast-paced business growth, ComNav Technology is making waves in the global high-precision GNSS industry.

HAPA ENGINEERING**C8**

Founded in 1988 as the headquarter of Ankara, has successfully completed the official and private contracts with many local and foreign companies with its 30 years of experience. MAIN FIELDS OF ACTIVITY: survey engineering, agricultural projects, digital photogrammetric map and ortofoto.

SUPERMAP**C9-10**

SuperMap Software Co., Ltd is an innovative GIS platform software and service provider. SuperMap has developed lots of agencies and partners all over the world to make more clients benefit from our advanced GIS technology.

GOZLEM MUH. A.Ş**C11**

In 1984, Gözlem Engineering established as a Limited Company. In 2015, changing of kind Gözlem Engineering named as Gözlem Müh Müt Pln ve Tic A.Ş. GÖZLEM performed many projects in Transportation Sector which is the area of expertise of the Company.

INTERGEO 2018**C12-13**

THE WORLD'S LEADING EVENT IN THE GEOSPATIAL COMMUNITY – Make new business contacts, tap into international sales channels and find new partners. More than 17,000 experts and 600 exhibitors cannot be found at any other event in the world. INTERGEO provides a superlative industry platform. Digitalisation of working processes and solutions are the highly focused topics. Relevant trends in forward-looking sectors like smart city, BIM, virtual and augmented and UAV's are taking up. Join us now!

HANDHELD GROUP**C14**

Handheld Group AB is a manufacturer and worldwide supplier of rugged PDAs and mobile computers. Together with partners Handheld deliver complete mobility solutions to businesses in industries such as, GIS/geodesy, construction, service & maintenance, military and security.

ATAY MÜH.**D1**

Atay has been working to serve best solutions to its customers on Photogrammetry, Remote Sensing, Geodesy, Defence Industry and Aviation entegrations for more than 20 years. Company has been supporting, training, servicing numerous different high tech products while informing its customers about applications in worldwide. Atay is focused on serving best solution to its customer in addition to meet their requirements.

PIX4D**D2**

Pix4D is a dynamic and rapidly expanding software company with headquarters in Lausanne, Switzerland, and local offices in San Francisco, Shanghai and Berlin. The company develops a line of end-to-end mapping solutions which convert images into georeferenced maps and models. Using advanced algorithms based on computer vision and photogrammetry, Pix4D offers survey-grade accuracy, as well as a unique bundle of desktop and cloud processing.

KOREALX**D3****JEO TEK LTD****D4**

Jeo Tek Ltd. was established in 1997 as a Turkish Company and registered in 2002 as a Saudi Foreign Investment Company under the name of Geo Tech Consulting (GTC). The companies are part of GeoTech Group, the powerful parent company which consists of:

- Jeo Tek Ltd., Turkey (1997)
- Geo Tech Consulting, Saudi Arabia (2002)
- Geo Tech Consulting, Libya (2005)
- Jeo IT, Turkey (2008)

MESCİOĞLU**D5**

Mescioğlu Engineering was established in 1984 as a conventional Mapping Company. At the moment Mescioğlu Company is offering services mainly in the field of Mapping, Land Registry and Cadastre, Photogrammetry and Remote Sensing, Transportation, Infrastructure Projects, Geographic Information Systems and other related engineering and consultancy issues.

RKSOFT**D6**

RKSOFT was incorporated in ODTÜ Teknokent (METU Technopolis) in order to develop national softwares in the field of Geographic Information Systems (GIS). The "MapCodeX GIS" product provides comprehensive GIS solutions to desktop computers, servers, mobile devices and different platforms.

BIRLIK MAPPING**D7**

BIRLIK MAPPING having NATO Facility Security Certificate, offers latest technology mapping applications like below.

- 3 D City Modelling, Oblique Photogrammetry
- Mobile Laser Scanning and Lidar Systems Applications
- Airborne Mapping Using Unmanned Aerial Vehicles

KOCAELİ METROPOLITAN MUNICIPALITY**D8**

Kocaeli Metropolitan Municipality provides service to approximately 1,800,000 people in 3505 km² area within 12 districts. 13% of total manufacturing industry in Turkey is located in Kocaeli. There are 2200 large industrial investments of which 247 are foreign-invested. There are two universities and the number of university student studying in the city is over 80 thousand. Kocaeli Metropolitan Municipality is exemplified for other municipalities on "Successful Municipality Practices".

TÜRKSAT**D9**

Turksat, one of the leading operators in the satellite communication business, offers flexible solutions by providing its customers with cable and wireless broadcasting, high-speed internet, and direct TV services. Turksat has made it a mission to transform information technology into services applicable to the everyday life. The company builds communication networks, and enhances innovative projects to provide seamless connectivity outside terrestrial network via Turksat satellites.

HEXAGON GEOSPATIAL | LUCIAD**D10**

Hexagon Geospatial helps to make sense of the dynamically changing world and enables customers to easily transform their data into actionable information. Now part of Hexagon Geospatial, Luciad delivers geospatial software solutions that power the world's mission critical operations.

NORDIC FOREIGN AID**D11**

Nordic Working Group for International Services is a joint collaboration between national mapping authorities of Denmark, Finland, Iceland, Norway and Sweden; coordinating foreign aid aimed at security of tenure ensuring social and economic development

RIEGL**E3**

RIEGL Laser Measurement Systems, Austria, – providing terrestrial, industrial, mobile, bathymetric, airborne, and UAV-based laser scanners and laser scanning systems – will showcase their latest developments in innovative Waveform-LiDAR technology on booth E3.

STONEX**E4-6**

STONEX is a world leader in measurement and Survey Technology, with qualified distributors worldwide. Stonex portfolio meets the needs of many field applications and industries such as: building and construction, land and

cadastral survey, GIS data collection, 3D scanning (architecture, archeology, industrial measurements), smart farming, land and structure monitoring.

CHC NAVIGATION

E7-8

CHC Navigation designs, manufactures and markets a wide range of competitive and reliable GNSS receivers and provides complete positioning solutions for surveying, construction, GIS and etc. in more than 100 countries. ISO 9001 certification applies to all aspects of CHC's every development process and workflow, covering all steps from the initial design to the final delivery. =CHC's international partner networks are bringing professional support to end-users everywhere around the world.

GENERAL COMMAND OF MAPPING

E9

With the background of 2 centuries, GCM (Turkish NMA), is a primary source of nationwide accurate and up-to-date geospatial data, produces geospatial data of various levels of detail, types, and scales, builds a comprehensive geospatial database, establishes and maintains the geodetic networks.

NETCAD YAZILIM

E10

Netcad was founded in 1989 with 100% nationally-financed capital to develop software for use in the engineering and project implementation fields such as Geographical Information Systems (GIS), Mapping, Urban Planning, Agricultural, Geological and Civil Engineering, Mining and Forestry. Netcad, with its 28 years of experience, today is one of the pioneer firms in software sector

GEOGIS

E11

GEOGIS was founded in Ankara in 1997. The company has 60+ engineers and totally 200+ employees. We have an aircraft and 2 aerial cameras for our photogrammetry projects. In brief all kind of project related with geospatial science is our profession.

FIG 2022 CAPE TOWN BID

E12

The South African Geomatics Institute is presenting a bid for the FIG Congress 2022 in Cape Town on behalf of Africa and within the context of work already undertaken by the FIG African Task Force, African Association of Remote Sensing of the Environment and African Geodetic Reference Frame. All efforts vital to the foundation of Africa's further development.

FIG WORKING WEEK 2021, ACCRA

E13

Licensed Surveyors Association of Ghana and Ghana Institution of Surveyors look forward to welcome you to FIG Working Week 2021 in Accra, Ghana.

NEW ZEALAND INSTITUTE OF SURVEYORS – NZIS

E14

NZIS was founded in 1888 as a national body to preserve and develop the integrity and status of the profession of surveying in New Zealand. Currently there are 16 branches throughout New Zealand and one in Hong Kong. Members are supported by a National Office based Wellington and guided by an elected president and councilors.

FIG's Technical Work is led by ten Commissions:

- Commission 1** Professional Standards and Practice – Dr. **Brian Coutts**, NZIS, New Zealand
- Commission 2** Professional Education – Ir. **Liza Groenendijk** (E.M.C), GIN, Netherlands / Dr.-Ing. **Fahria Masum**, Germany
- Commission 3** Spatial Information Management – Mr. **Enrico Rispoli**, CNGeGL, Italy
- Commission 4** Hydrography – Ms. **Angela Etuonovbe**, NIS, Nigeria
- Commission 5** Positioning and Measurement – Prof. **Volker Schwieger**, DVW, Germany
- Commission 6** Engineering Surveys – Dr. **Ivo Milev**, USLMB, Bulgaria
- Commission 7** Cadastre and Land Management – Mrs. **Gerda Schennach**, OVG, Austria
- Commission 8** Spatial Planning and Development – Mr. **Kwame Tenadu**, GhIS, Ghana
- Commission 9** Valuation and the Management of Real Estate – Mr. **Steven Nystrom**, NSPS, United States
- Commission 10** Construction Economics and Management – Mr. **See Lian Ong**, RICS, Malaysia

The Scientific Committee of the Peer Review Papers

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- Ms. **Heidi Falkenbach**, Finland
- Prof. **Yerach Doytsher**, Israel

Friday, 4 May 2017

FIG COUNCIL MEETING

FRIDAY, 4 MAY 08:00–18:00
VENUE: VISTA, HILTON BOSPHORUS
CHAIR: PROF. DR. **CHRYSSY POTSIUO**,
 FIG PRESIDENT

- By invitation only

REFERENCE FRAMES IN PRACTICE SEMINAR

FRIDAY, 4 MAY 08:30–18:00
VENUE: ŞADIRVAN A, HILTON
CHAIRS: PROF. DR. **MUZAFFER KAHVECİ**, PROF. DR. **VOLKER SCHWIEGER**, (FIG), MS. **SHARAFAT GADIMOVA** (ICG)
 DR. **DAN ROMAN** (IAG)

The technical seminar aims at surveyors, spatial professionals, students and operational geodesists who are interested

in learning more about practical aspects of reference frames from some of the world's leading geodesists and geodetic surveyors. As well as covering reference frame basics, the two-day seminar focused particularly on dealing with deformation and datum unification.

For more information, please visit www.fig.net/fig2018/rfp.htm.
 Registration is required. Tickets available for purchase from the Registration Desk.

Saturday, 5 May 2018

ACCO MEETING

SATURDAY, 5 MAY 08:30–17:00
VENUE: VISTA, HILTON BOSPHORUS
CHAIR: DR. **DIANE DUMASHIE**, UNITED KINGDOM

- By invitation only

BIM FOR SURVEYORS

SATURDAY, 5 MAY 09:00–15:00
VENUE: ŞADIRVAN B, HILTON
CHAIR: PROF. **CHRISTIAN CLEMEN**, GERMANY

Building Information Modeling (BIM) is changing the way how surveyors work, think, collaborate and make money. Using and sharing multidimensional digital representations of buildings are the driving forces for the digitalization of our work. This affects many tasks surveyors and GIS professionals perform, e.g. cost estimation, GIS analysis, engineering surveying, construction work, land management and facilities management.

Scope of the Workshop:

- Teaching theoretical background of the BIM method (concepts, workflows and standards)
- Best practice presentations from large projects and SME (from surveyor's point of view)
- Presentation of the latest software (surveying, integration and collaboration with BIM, CAD, GIS)

For more information, see www.fig.net/fig2018/bim.htm.

Registration is required. Tickets available for purchase from the Registration Desk.

4TH FIG YOUNG SURVEYORS CONFERENCE

SATURDAY, 5 MAY 09:00–17:00
VENUE: BALLROOM, HILTON
CHAIR: MS. **EVA-MARIA UNGER**, AUSTRIA
RAPPORTEUR: MS. **MELISSA HARRINGTON**, NEW ZEALAND



Beyond Boundaries: The Changing Role of the Surveyor

In the fast paced world of today, technology is rapidly evolving and so is the role of surveyors. From basic mapping to geodesy and data analytics, surveyors play an important and diverse role in society and economy. The shrinking gap between consumer and professional geospatial applications is driving the need for greater awareness of surveyors and the important role they play. Surveyors of today support an informed society today, and tomorrow that leverages geospatial Information Management. The 4th Young Surveyors Conference is a two day event that provides an environment for Young Surveyors from different cultures, countries, academic qualifications, and professional experience to dialogue and discuss these changes and how they can play an integral role in the future, in a society where all information are managed geospatially.

For more information, see www.fig.net/fig2018/youngsurveyors.htm.
 Registration is required. Tickets available for purchase from the Registration Desk.

REFERENCE FRAMES IN PRACTICE SEMINAR – DAY 2

SATURDAY, 5 MAY 09:00–19:00
VENUE: ŞADIRVAN A, HILTON
CHAIRS: PROF. DR. **MUZAFFER KAHVECİ**, PROF. DR. **VOLKER SCHWIEGER**, (FIG), MS. **SHARAFAT GADIMOVA** (ICG)
 DR. **DAN ROMAN** (IAG)

Sunday, 6 May 2018

GENERAL ASSEMBLY – PART 1

SUNDAY, 6 MAY 09:00–17:00
VENUE: ÜSKÜDAR HALL 1, 2 & 3, ISTANBUL CONGRESS CENTER
CHAIR: PROF. DR. **CHRYSSY POTSIUO**, FIG PRESIDENT

- For all FIG members
- Open for observers

4TH YOUNG SURVEYORS CONFERENCE – DAY 2

SUNDAY, 6 MAY 09:00–16:00
VENUE: HILTON BOSPHORUS ISTANBUL, BALL ROOM

END-TO-END BIM AT THE WORLD'S LARGEST AIRPORT – TECHNICAL TOUR

SUNDAY, 6 MAY 10:00–15:00
VENUE: ISTANBUL AIRPORT

Organisation: Dr. **Ozan Köseoglu**, iGA – Istanbul New Airporturo.

CHARITY DANCE

SUNDAY, 6 MAY 17:00–18:00
VENUE: HILTON BOSPHORUS ISTANBUL, BALL ROOM

...put on your chance shoes!
 WE WANT TO DO GOOD – and give back.

With this charity dance we will support Humanitarian Open- StreetMap Local community “Yer Çizenler Herkes İçin Harıtaçlık Derneği” and FIG Foundation.

THE HUMANITARIAN OPENSTREETMAP TEAM (HOT) applies the principles of open source and open data sharing for humanitarian response and economic development.

FIG FOUNDATION is an independent body under FIG established for raising funds to finance surveying education development projects and supporting young surveyors.

The minimum donation will be 10 Euro – as thanks you will receive the YS Charity Dance T-shirt.

WELCOME RECEPTION

SUNDAY, 6 MAY 19:00–20:30
VENUE: HILTON BOSPHORUS ISTANBUL – POOL SIDE

Participants of FIG 2018 Congress are invited to a Welcome Reception at the Hilton Bosphorus Istanbul Pool Side to inspire the smell of Bosphorus. Hilton Bosphorus Istanbul is the first five-star hotel of the city. It is operating since June, 1955.

Monday, 7 May					
	BEYLERBEYİ HALL 1	BEYLERBEYİ HALL 2	ÇAMLICA HALL	EMİRGAN HALL 1	EMİRGAN HALL 2
08:00–08:45	Newcomers Session EMİRGAN HALL 2				
09:00–10:30	Opening Ceremony HARBIYE AUDITORIUM				
11:00–12:30	Plenary Session 1 – Urban Development HARBIYE AUDITORIUM				
14:00–15:30	TS01C: Crowdsourcing – VGI and E-Governance – C: 3	TS01D: Hydrographic Standards and Marine Surveying – C: 4	TS01I: Technological Change in Land Administration, Valuation and Financial Technology – C: 9	TS01A: Ethics and the Practising Surveyor – C: 1	TS01B: Surveying Education: Challenges and Opportunities – C: 2
16:00–17:30	TS02C: Spatial Data Infrastructure – C: 3	TS02D: Technologies and Sensors for Hydrography – C: 4	TS02I: The Intersection of Land Valuation and Real Estate Infrastructure – C: 9	Asia Pacific Capacity Development Network Special Forum	
Tuesday, 8 May					
07:00–08:45	STDM Advisory Committee Meeting ELMADAĞ 2.1 FIG Foundation Meeting YILDIZ 3				
07:45–08:45	Africa Capacity Development Network – Breakfast Meeting MAÇKA HALL				
08:00–09:00	Editorial Board Meeting – Peer Review YILDIZ 1				
09:00–10:30	Plenary Session 2 – Modern Technology Usage for our Profession ÜSKÜDAR HALL 1, 2 & 3				
11:00–12:30	TS03C: Land Administration System – SIM – BIM – 3D Models – C: 3	FIG Director Generals Forum	FIG Member Association Forum	TS03A: Sustainability/International Boundaries – C: 1	FIG Young Surveyors: The Future of our Network – C: YS
12:30–14:00	GLTN Professional Cluster Meeting YILDIZ 3				
14:00–15:30	TS04C: Best Practices 3D Cadastres – C: 3 & 7, WG 3D	Fit-for-Purpose Land Administration (UN-Habitat/GLTN, Kadaster and FIG)	Achieving the Successful Introduction of Value-based Property Taxes (World Bank & FIG)	FIG Standards Network Session	FIG YSN Mapathon with HOT & Yer Cizenler
16:00–17:30	TS05C: Developing 3D Models for a 3D World – C: 3 & 7	TS05D: Hydrography and Disaster Management – C: 4	TS05I: Land Valuation Methodologies Embracing Technological Change – C: 9	TS05A: Commission 1 and the Future – C: 1	TS05B: Innovative Education and Training in Pursuit of Advancement in Surveying Profession – C: 2
17:30–18:30	FIG Commissions Annual Meetings ICC				
Wednesday, 9 May					
09:00–10:30	Plenary Session 3 – Rural Development ÜSKÜDAR HALL 1, 2 & 3				
11:00–12:30	TS06C: Topography – VGI – Open Data – C: 3	Social Tenure Domain Model – Development and Application (FIG YSN & UN-Habitat GLTN)	TS06I: The Property Management, Planning and Administration of Real Estate Assets – C: 7, 8 & 9	EgoS General Assembly	Best Practice for Land Consolidation Legislation in Line with VGGT (FAO & FIG)
14:00–15:30	TS07C: Geo-Data Management and Land Information System – C: 3		Land Tenure, Climate Vulnerability and Adaptive Capacity (UN-Habitat/GLTN, RMIT and FIG)	EgoS General Assembly	Round Table on Securing Tenure Rights, Surveying and the VGGT (FAO & FIG)
16:00–17:30	TS08C: Remote Data Capture for Securing Land Information – C: 3 and 7		Launch of 'Valuation of Unregistered Lands: A Policy Guide' (UN-Habitat, FIG and RICS)	EgoS General Assembly	FIG Young Surveyors: Mentoring Toolkit – C: YS
Thursday, 10 May					
07:00–08:30	ACCO Breakfast Meeting YILDIZ 1				
09:00–10:30	Plenary Session 4 – Spatially Enabled Societies ÜSKÜDAR HALL 1, 2 & 3				
11:00–12:30	TS09C: GIS as a Critical Tool in Disaster Preparedness, Recovery and Management – C: 3		TS09I: Mass Appraisal Challenges and Solutions for a Smarter World – C: 9	History Session 1 – Flying High Over the Ancient World – C: H	Use and Application of STDM – Session 1 09:00–10:30 – Session 2 11:00–12:30
14:00–15:30	TS10C: Land Administration System – SIM – BIM – 3D Models II – C: 3		TS10I: Overcoming Extreme Challenges in Opaque Land Markets – C: 9	History Session 2 – Medieval Measurements in the Cadastres of Antiquity – C: H	STDM Code Sprint – Session 1
16:00–17:30	TS11C: GIS – Cartography – Aerophotogrammetry and Remote Sensing – C: 3				STDM Code Sprint – Session 2

Monday, 7 May						
HAMİDIYE HALL	MAÇKA HALL	ÜSKÜDAR HALL 1	ÜSKÜDAR HALL 2	ÜSKÜDAR HALL 3	SPECIAL	
						08:00–08:45
						09:00–10:30
						11:00–12:30
Platinum Member Session – TRIMBLE	Country to Country: Partnerships to Support Land Administration System Investment (World Bank & FIG)	TS01E: GNSS – CORS – C: 5	TS01G: Modern Land Registration Techniques – C: 7	High Level Session Volunteer Community Surveyor Program (VCSP) (UN-Habitat GLTN & FIG YSN) – C: 8	YILDIZ 1: Open Meeting on Education Training and Capacity Building in Geodesy (UNGGIM & FIG)	14:00–15:30
TS02F: Engineering Surveys for Design, Constructive Works and Exploitation of Buildings and Transportation Infrastructure – C: 6	TS02J: Project, Construction and Risk Management – C: 10	TS02E: GNSS Measurements Technique – C: 5	TS02G: Restoring Rights in Risk Zones and Agricultural Regions – C: 7	Volunteer Community Surveyor Program (VCSP) Roundtable (UN-Habitat GLTN & FIG YSN)		16:00–17:30
Tuesday, 8 May						
						07:00–08:45
						07:45–08:45
						08:00–09:00
						09:00–10:30
Platinum Member Session – LEICA GEOSYSTEMS	Turkish Speaking and Mid Asian Countries Workshop I	TS03E: Multi-GNSS – C: 5	TS03G: Protection of Land Rights – C: 7	TS03H: Water, Energy and Resource Governance and Use – C: 8		11:00–12:30
						12:30–14:00
TS04F: Deformation Analysis I – C: 6	Turkish Speaking and Mid Asian Countries Workshop II	TS04E: GNSS PPP and Networks	TS04G: Best Practice Models in Land Administration – C: 7	TS04H: Land Use Planning Systems and Policies – C: 8		14:00–15:30
TS05F: Deformation Analysis II – C: 6	TS05J: Roundtable Discussion on BIM – C: 10	TS05E: Future of Positioning – C: 5	TS05G: Monitoring and Assessment of Cadastral Data – C: 7	TS05H: Urban Planning and Cities Development – C: 8	YILDIZ 3: FIG Corporate Members Meeting	16:00–17:30
						17:30–18:30
Wednesday, 9 May						
						09:00–10:30
Platinum Member Session – ESRI	TS06J: Construction Technology and Innovations – C: 10	TS06E: Gravity and Geoid – C: 5		TS06H: Rural Development and Land Use – C: 8		11:00–12:30
TS07F: French Session I	ISS 1: GIS Application & Mapping for Public Delivery C: ISS	TS07E: Reference Frames– C: 5	TS07G: 3D Relationship in Land Management – C: 7	TS07H: Resilience Planning and Disaster Risks – C: 8		14:00–15:30
	ISS 2: Geodesy and Surveying Applications – C: ISS	TS08E: Modern Surveying Techniques and Applications – C: 5	TS08G: Technology Meets Social Aspects – C: 7	TS08H: Land Consolidation and Re-adjustment in Land Use Planning – C: 8	SAIT HALIM PAŞA MANSION Regional Bodies Forum	16:00–17:30
Thursday, 10 May						
						07:00–08:30
						09:00–10:30
FIG Academic Forum on VGGT (FAO & FIG)	ISS 3: Emerging Trends in Managing Urbanisation and Natural Resources – C: ISS	TS09E: Geodetic Algorithms – C: 5	TS09G: Fit-for-Purpose – Fit-for-People – C: 7	TS09H: Technology Transforming Spatial Planning – C: 8		11:00–12:30
TS10F: French Session II	Round Table on Property for Women in Muslim Countries (UN-Habitat GLTN & FIG)	TS10E: Geodetic Risk Monitoring – C: 5	TS10G: Modelling Diversity of Land Tenure – C: 7	TS10H: Urban Innovations and Mobility Challenges – C: 8		14:00–15:30
ILMS Meeting (International Land Measurement Standards Coalition)		TS11E: Terrestrial Laser Scanning – C: 5 & 6	TS11G: Cadastre – towards a fully Digital Future – C: 7	TS11H: The Role of Spatial Planning in Sustainable Development – C: 8		16:00–17:30

Monday, 7 May

NEWCOMERS SESSION

MONDAY, 7 MAY 08:00–08:45
VENUE: EMIRGAN HALL 2, ISTANBUL CONGRESS CENTER
CHAIR: DR. **DIANE DUMASHIE**, FIG VICE PRESIDENT, UNITED KINGDOM

New to the FIG Congress?

Join us at the session for newcomers to meet members of the council, the FIG Office and other participants who will experience the FIG Congress for the first time. Do not miss this opportunity to learn more about FIG, on how to maximize your conference experience and making most of your attendance. First time attendees will be introduced to the programme, the keynote speakers, the sessions tracks, the roundtable discussions, the sponsors and social events.

The official Opening Ceremony of the conference will immediately follow the newcomers session. We look forward to seeing you there!

OPENING CEREMONY

MONDAY, 7 MAY 09:00–10:30
VENUE: HARBIYE AUDITORIUM, ISTANBUL CONGRESS CENTER

The opening ceremony will provide a spectacular introduction to the Congress, its theme, and its unique location – a festive start of the Week.

PLENARY SESSION 1 – URBAN DEVELOPMENT

MONDAY, 7 MAY 11:00–12:30
VENUE: HARBIYE AUDITORIUM, ISTANBUL CONGRESS CENTER
CHAIR: MS. **OYLUM TALU**, TURKEY

Prof. Dr. **Chryssy Potsiou**, FIG President: Achievements FIG 2015–2018

Prof. **Ali Parsa**, Royal Agricultural University Cirencester: The Fourth Industrial Revolution and Impact on Urban Development: the Role of Real Estate

Mr. **Mehmet Özhaseki**, Minister of Environment and Urban Planning: Urbanization Policy and Urban Regeneration Projects in Turkey

Monday, 7 May 2018 14:00–15:30

OPEN MEETING ON EDUCATION TRAINING AND CAPACITY BUILDING IN GEODESY (UN-GGIM & FIG)

MONDAY, 7 MAY 14:00–15:30
VENUE: YILDIZ 1, ISTANBUL CONGRESS CENTER
CHAIR: MR. **MIKAEL LILJE**, FIG VICE PRESIDENT

In order to implement the UN resolution Global Geodetic Reference Frame for sustainable Development, the UN Subcommittee on Geodesy has started five focus groups. One of the groups is on Education, Training and Capacity Building. The group is focusing on finding out the needs to ensure that there are enough competence concerning knowledge on geodetic infrastructure both on a global, regional and national level. This meeting will be an open meeting to discuss the work so far as well as certain needs that a country would like to raise.

TS01A: ETHICS AND THE PRACTICING SURVEYOR

MONDAY, 7 MAY 14:00–15:30
VENUE: EMIRGAN HALL 1, ISTANBUL CONGRESS CENTER
COMMISSION: 1
CHAIR: MS. **WINNIE SHIU**, HONG KONG SAR, CHINA
RAPPORTEUR: MS. **KATE FAIRLIE**, UNITED KINGDOM

Gary Strong (United Kingdom): Why Ethics Standards are of Limited Use on their own for Professionals Working in Land, Property and Construction – and if to be Effective how such Standards Need to be Embedded, Monitored and Regulated Against Workshop with real life case studies (9396)

Robert W. Foster (USA): Globalized Ethics (9204)

Habtemicael Weldegiorgis (Eritrea): The Importance of Notary Public in the Eritrean Cadastre System (9205)

Kengo Okada (Japan): Importance of Survey Marker Standard for ISO or FIG as Default Standard (9370)

TS01B: SURVEYING EDUCATION: CHALLENGES AND OPPORTUNITIES

MONDAY, 7 MAY 14:00–15:30
VENUE: EMIRGAN HALL 2, ISTANBUL CONGRESS CENTER
COMMISSION: 2
CHAIR: PROF. **JENNIFER WHITTAL**, SOUTH AFRICA
RAPPORTEUR: MR. **MARINUS DE BAKKER**, NETHERLANDS

John Hohol (USA): The FIG Foundation Building a Sustainable Future: A Report on Activities Supported by FIG Foundation Grants (9177)

Syed Zafar Abbas (Pakistan): Is Education an Industry? (9185)

Ayodeji Oke, Clinton Aigbavboa and Abram Kekana (South Africa): Improving Mentoring Programs of Construction Graduates in South Africa (9212)
This is a peer reviewed paper.

Yakubu Issaka, Yao Yevenyo Ziggah and Kwame Tenadu (Ghana): Education for Spatial Planning and Design: Integrating Surveying and Mapping Sciences as a Foundation (9676)

FIG PLATINUM MEMBER SESSION – TRIMBLE

MONDAY, 7 MAY 14:00–15:30
VENUE: HAMIDIYE HALL, ISTANBUL CONGRESS CENTER

Field to Finish with Confidence: Enhanced Productivity with Trimble

Trimble presents its approach for transforming survey and engineering workflows by integrating technology solutions to provide cadastral and construction professionals with greater productivity.

Presenters:

- Mr. **Boris Skopljak**, United States
- Ms. **Stephanie Michaud**, United States

**HIGH LEVEL SESSION VOLUNTEER COMMUNITY SURVEYOR PROGRAM (VCSP) (UN-HABITAT GLTN & FIG YSN)**

MONDAY, 7 MAY 14:00–15:30
VENUE: ÜSKÜDAR HALL 3, ISTANBUL CONGRESS CENTER
CHAIR: MS. **EVA-MARIA UNGER**, AUSTRIA
RAPPORTEUR: GLTN

Together with Global Land Tool Network (GLTN), the FIG Young Surveyors Network (FIG YSN) established a competence based volunteer program for Young Surveyors also known as Volunteer Community Surveyor Program (VCSP). VCSP is an innovative volunteer program that is a powerful driver for both social impact and professional development. The VCSP leverages on the skills, experience, talents and education of young surveyors, matches this competence with the needs of GLTN, particularly in GLTN's county level implementation plans and programs.

This session is all about the Feedback/Reflection on the Volunteer Program, which was a small-scale, short-term pilot that helped GLTN/ UN-Habitat and FIG YSN to learn how a large-scale program might work in practice. This pilot provided a platform for all stakeholders to test logistics, prove value and reveal benefits. The Volunteer Community Surveyor Program was scheduled for a one-year period and after that a committee evaluated the program. The impact and the evaluation will be presented during this session which will follow by a roundtable focusing on the future of the Volunteer Program.

COUNTRY TO COUNTRY: PARTNERSHIPS TO SUPPORT LAND ADMINISTRATION SYSTEM INVESTMENT (WORLD BANK & FIG)

MONDAY, 7 MAY 14:00–15:30
VENUE: MACKA HALL, ISTANBUL CONGRESS CENTER
CHAIR: MR. **KEITH CLIFFORD BELL**, THAILAND
RAPPORTEUR: DR. **ORHAN ERCAN**, TURKEY

Objective:

To discuss country-country partnerships to support land administration system institutional development and capacity building, with specific lessons from the Afghanistan–Turkish experiences 2016–2018 and drawing on further global experiences from session participants.

EXHIBITION STAGE

MONDAY, 7 MAY
12:30
ESRI

**EXHIBITION STAGE**

MONDAY, 7 MAY
13:30
LEICA



TS01C: CROWDSOURCING – VGI AND E-GOVERNANCE

MONDAY, 7 MAY 14:00–15:30

VENUE: BEYLERBEYI HALL 1, ISTANBUL CONGRESS CENTER

COMMISSION: 3

CHAIR: PROF. HARTMUT MÜLLER, GERMANY

RAPPOREUR: DR. ENRICO RISPOLI, ITALY

Serhat Cabuk, Coskun Kiraci, Mustafa Kaya, Mustafa Erdogan and Oktay Eker (Turkey): A Study on The Usability of Digital Elevation Models Obtained From Open Sources in the Production of Contours : Comparison of ALOS and SRTM DEM Data (9259)

Wasim Shoman, Fatih Kafali and Fatih Gulgen (Turkey): Spatial Open Data Initiative for Turkey (9388)

Fanise Uslu, S. Savas Durduran and Asli Bozdag (Turkey): Investigation of the Spatial Address Recording System (SARS) Project Process to Be Base the Urban Information System (uis) (9442)

Nick Land (United Kingdom): Reimagining the Implementation of Spatial Data Infrastructures (SDI) (9577)

Deniztan Ulutas, Gülten Kara, Cemre Yilmaz and Çetin Comert (Turkey): Semantic Linking Spatial RDF Data to The Web Data Sources (9585)

TS01D: HYDROGRAPHIC STANDARDS AND MARINE SURVEYING

MONDAY, 7 MAY 14:00–15:30

VENUE: BEYLERBEYI HALL 2, ISTANBUL CONGRESS CENTER

COMMISSION: 4

CHAIR: MS. ANGELA ETUONOVBE, NIGERIA

RAPPOREUR: MR. IBRAHIM ÖZTUG BILDIRICI, TURKEY

Ashraf Abdallah (Egypt) and **Volker Schwieger** (Germany): Improving Hydrographic PPP by Height Constraining (9192) *This is a peer reviewed paper.*

Vrignaud Christophe (France) and **Ironside Simon** (New Zealand):

Updating IHO Publication S-44, Standards for Hydrographic Surveys – Planning for the Future of Safe Navigation (9291)

Nicola Marco Pizzeghello (Italy), **Aff Ghaiith** (Lebanon), **Lamberto Orlando Lamberti** (Italy), **Elie Jbeily and Christian Fahed** (Lebanon):

Building a New National Hydrographic Service: the Italian-Lebanese Collaboration (9373)

Nawi Abdullah (Malaysia): Selection of Algorithms to Determine Foot of the Continental Slope to Delineate the Extended of the Continental Shelf (9588)

Gordon Johnston (United Kingdom): Ocean Surveying – Where to Start across the deep blue Ocean? (9623)

Mustafa Iptes (Monaco): Importance of Land-sea Interface and Improving Data Gathering, Data Management, Maritime Spatial Data (9722)

TS01E: GNSS – CORS

MONDAY, 7 MAY 14:00–15:30

VENUE: ÜSKÜDAR HALL 1, ISTANBUL CONGRESS CENTER

COMMISSION: 5

CHAIR: PROF. DR. MUZAFFER KAHVECI, TURKEY

RAPPOREUR: MS. LI ZHANG, GERMANY

Ali Alomar (Saudi Arabia), **Ramazan Yanar** (Turkey), **Sami Albalawi and Saeed Alzahrani** (Saudi Arabia): The Kingdom of Saudi Arabia GNSS Real-Time Kinematic Network (MRTN) and Beyond (a Case Study for High Accuracy Vrs Correction Test) (9331)

Ayhan Ceylan (Turkey): CORS Networks and Investigation of Point Positioning Accuracy of Konya Permanent Gns Network (KOSAGA) (9624)

Sebastian Senyo Botsyo, John Ayer and Bernard Borketey Bortei (Ghana): Cors Usage for GPS Survey in Greater Accra Region: Advantages, Limitation & Suggested Remedies (9178)

Ercenk Ata, Atinc Pirtiri and Ramazan Gursel Hosbas (Turkey): Testing Height Accuracy in CORS-TR Technique (9293)

Sedat Bakici, Tahsin Kara, Serdar Erguner, Ali Ilbey and Erkan Kulaksiz (Turkey): Evaluation Business Model of TUSAGA-Aktif (CORS-Tr) (9286)

Mpaka Erekosima and Benjamin Onoriode (Nigeria): GPS CORS Technology Implementation in the Oil Industry – Benefits and Challenges (9459)

Sedat Bakici, Bilal Erkek, Alper Altekin and Volkan Manti (Turkey): Challenges in Data Communication and Cyber Security of TUSAGA-Aktif (CORS-Tr) (9287)

TS01G: MODERN LAND REGISTRATION TECHNIQUES

MONDAY, 7 MAY 14:00–15:30

VENUE: ÜSKÜDAR HALL 2, ISTANBUL CONGRESS CENTER

COMMISSION: 7

CHAIR: DR. DANIEL STEUDLER, SWITZERLAND

RAPPOREUR: DR. VLADIMIRA ZUFANOVA, CZECH REPUBLIC

Ela Ertunç and Tayfun Çay (Turkey): Hybrid Method Application in Land Consolidation Studies (9180)

Ismail Dursun (Turkey): Standardization of Property Qualities (9190)

Jaap Zevenbergen (Netherlands), **Walter de Vries** (Germany) and **Rohan Bennett** (Australia): Dynamics in Responsible Land Administration; Change at Five Levels (9349)

Hiroyuki Hasegawa and Marie Sato (Japan): Cadastre2014 Japan to Osaka-ALKIS type Cadastre (9390)

Hicret Gursoy Surmeneli, Zeynel Abidin Polat and Mehmet Alkan (Turkey): How to Be Created a New Terminology for 3- and 4-Dimensional Cadastre in Turkey (9487)

Amani Michael Uisso and Harun Tanrivermis (Turkey): Assessment of Land Distribution and Demand in the Land Based Sector and Its Policy Implications in Tanzania (9664)

Fredrik Zetterquist (Sweden): Fit-For-Future Land Administration: Unlocking the Benefits of Sustainable, Cost-Effective Technologies (9697)

TS01I: TECHNOLOGICAL CHANGE IN LAND ADMINISTRATION, VALUATION AND FINANCIAL TECHNOLOGY

MONDAY, 7 MAY 14:00–15:30

VENUE: CAMLICA HALL, ISTANBUL CONGRESS CENTER

COMMISSION: 9

CHAIR: MR. STEVEN NYSTROM, UNITED STATES

RAPPOREUR: MR. MANOHAR VELPURI, DENMARK

Akin Ozturk, Yunus Emre Kapusuz and Harun Tanrivermis (Turkey): An Analysis of Construction and Real Estate Sectors Using Input – Output Tables in Turkey and a Comparison with Oecd Countries (9671)

K Chan (Hong Kong SAR, China): Embracing Our Smart World by Enhancing Information Technology for Office Buildings (9193)

Manohar Velpuri, Member, UNGGIM PSN (Denmark), **Madhu Aman Sharma**, Director (Cambodia), **Chetan Maringanti, Surya Bhamidipati**, Director, TLF Consortium (India) and **Yee Hoong Chin**, Director (Singapore): Fintech for Geo-spatial Transformation and Real Estate Management (9184)

Miroslav Kobasa, Sergei Shavrov and Olga Batara (Belarus): ISO19152 Standard: Role of LA_ExtValuation Class for Land Administration (9336)

Yusuf Cicek and Tayfun Cay (Turkey): Transfer of Development Rights and Challenges in Turkey (9295)



Monday, 7 May 2018 16:00–17:30

ASIA PACIFIC CAPACITY DEVELOPMENT NETWORK SPECIAL FORUM

MONDAY, 7 MAY 16:00–17:30
VENUE: EMIRGAN HALL 1, ISTANBUL CONGRESS CENTER
CHAIR: MR. **ROB SARIB**, AUSTRALIA

The main purpose of this forum is to discover and share information on FIG activities that are occurring in Asia and the Pacific region. The following will make 5 slides – 5 minutes presentation:

- Rob Sarib**, FIG AP CDN / SSSI
Overview of Challenges and Trends
 - Stefan Wei**, Hi Target Global
Role of Manufacturers
 - Fredrik Zetterquist**, Ordinance Survey-UK
How to secure land administration capacity in a rapidly changing environment?
 - Ryan Ruddick**, UN GGIM AP WG1 / Geoscience Australia
 - Mikael Lilje**, UN GGRF / FIG
 - Basara Miyahara**, UN GGIM AP WG1 / GSI
 - Viliami Folau**, PGSC / Tonga
 - Asakaia Tabua**, PGSC / Fiji
 - Graeme Blick**, UN ETCB / LINZ
 - Allison Craddock**, UN ETCB / JPL NASA
 - Victor Khoo**, Singapore Land Authority
 - Kate Farlie**, Land Equity International
 - Nic Donnelly**, FIG Comm 5 / LINZ
 - Andrick Lal**, PGSC
- Discussion on:**
- What are the priorities of our network?
 - How can these be achieved?
 - Who needs to be involved?

TS02C: SPATIAL DATA INFRASTRUCTURE

MONDAY, 7 MAY 16:00–17:30
VENUE: BEYLERBEYI HALL 1, ISTANBUL CONGRESS CENTER
COMMISSION: 3
CHAIR: PROF. **CHARALABOS IOANNIDIS**, GREECE
RAPPORTEUR: MR. **DANIELE BRANCATO**, ITALY

Emin Bank (Turkey):
Spatial Data Management From Local To Center (9202)

Ali Toksoy, Onur Lenk, Hüseyin Bayraktar, Mahir Güney and Erkan Tın (Turkey):
INSPIRing Geospatial Framework for Local Administrations (9255)

Harry Ferdiansyah (Germany) and **Franco Jhoner** (Indonesia):
Legal Aspects on Enriching Authoritative Geospatial Information Using Participatory Mapping Data (9277)
This is a peer reviewed paper.

Lopang Maphale and Kealeboga Kaizer Moreri (Botswana):
A Consideration for a Conceptual Partnership Framework in Building Spatial Data Infrastructures in Developing Countries (9288)
This is a peer reviewed paper.

Fabio Bittencourt and Jaana Mäkelä (Finland):
How to assure quality and reliability for Spatial Data Infrastructures of Mapping, Cadastral and Land Registry organizations (9359)

Jaana Mäkelä and Fabio Bittencourt (Finland):
Recognizing the Success of Spatial Data Infrastructures (9543)

TS02D: TECHNOLOGIES AND SENSORS FOR HYDROGRAPHY

MONDAY, 7 MAY 16:00–17:30
VENUE: BEYLERBEYI HALL 2, ISTANBUL CONGRESS CENTER
COMMISSION: 4
CHAIR: MR. **GORDON JOHNSTON**, UNITED KINGDOM
RAPPORTEUR: MS. **ABDULLAH NAWI**, MALAYSIA

Amos Ugwuoti, Lecturer 1, **Oliver Ojinnaka**, Professor and **Angela Etuonevbe**, Ph.D Student (Nigeria):
Effect of Sonar Beamwidth and Slopping Sea Bed on the Accuracy of Bathymetric Survey (9196)

Amalina Izzati Abdul Hamid, Ami Hassan Md Din and Kamaludin Mohd Omar (Malaysia):
Interpreting the Sea Level Variability over Malaysian Seas using Multi-mission Satellite Altimeter (9253)
This is a peer reviewed paper.

Murat Uysal, Veli İlçi, İbrahim Murat Ozulu, Serdar Erol and Reha Metin Alkan (Turkey):
3D Shoreline Mapping Using an Unmanned Aerial Vehicle (9460)

Volkan Akgül, Can Atalay and Kazimierz Becek (Turkey):
Investigating the Vertical Accuracy of Water Level Determination Using Electromagnetic Survey Instruments (9561)

Gordana Jakovljević (Bosnia and Herzegovina), **Miro Govedarica and Dušan Jovanović** (Serbia):
The Role of Geospatial Technology in the EU Water Frame Directive Implementation (9599)

Stefan Wei and Adin Lee, Product Manager (China, PR):
The Unmanned Surface Vessel used in Hydrographic Surveying (9630)

TS02E: GNSS MEASUREMENTS TECHNIQUE

MONDAY, 7 MAY 16:00–17:30
VENUE: ÜSKÜDAR HALL 1, ISTANBUL CONGRESS CENTER
COMMISSION: 5
CHAIR: PROF. DR. **MUALLA YALCINKAYA**, TURKEY
RAPPORTEUR: DR. **SUELYNN CHOY**, AUSTRALIA

Atınç Pirtı, Ercenk Ata and Ramazan Gürsel Hoşbaş (Turkey):
Evaluation of the Accuracy and Performance of GPS/GNSS Antennas (9280)

Yasuhiro Onaka, Section Chief, **Basara Miyahara**, Director, **Naohiro Tada**, Section Staff, **Tomoaki Furuya**, Deputy Director and **Kohei Miyagawa**, Executive Officer (Japan):
Improvement of GNSS Positioning Accuracy Under Urban Environment by Multipath Mitigation Methods (9382)

Mohamed Abdelazeem (Egypt), **Rahmi Çelik** (Turkey) and **Ahmed El-Rabbany** (Canada):
Performance Evaluation of Two Interpolation Techniques for GPS/BeiDou-Based Regional TEC Model (9238)
This is a peer reviewed paper.

Sofiane Khelifa (Algeria):
Investigation of Atmospheric and Hydrological Loading Signals in the Annual Signal of GPS Station Positions (9375)

Mustafa Ulukavak and Mualla Yalcinkaya (Turkey):
Analysis of Ionospheric Anomalies due to Space Weather Conditions by using GPS-TEC Variations (9563)

TS02F: ENGINEERING SURVEYS FOR DESIGN, CONSTRUCTIVE WORKS AND EXPLOITATION OF BUILDINGS AND TRANSPORTATION INFRASTRUCTURE

MONDAY, 7 MAY 16:00–17:30
VENUE: HAMIDIYE HALL, ISTANBUL CONGRESS CENTER
COMMISSION: 6
CHAIR: MS. **MARIA JOAO HENRIQUES**, PORTUGAL
RAPPORTEUR: MR. **LI GUANQING**, CHINA PR

Guanqing Li and Shengxiang Huang (China, PR):
Control Survey for a 6.7 Km Immersed Tunnel in Chinese Lingding Ocean (9227)
This is a peer reviewed paper.

Weber Armin and Lerch Thomas (Switzerland):
Comparing Workflow and Point Cloud Outputs of the Trimble SX10 TLS and senseFly eBee Plus Drone (9271)

Chao Chen, PhD candidate
Llewellyn Tang, Associate Professor, **Craig M. Hancock**, Professor (United Kingdom), **Jingjing Yan**, PhD candidate, **Huib de Ligt**, senior researcher (Netherlands) and **Penghe Zhang**, PhD candidate (China, PR):
2D-based Indoor Mobile Laser Scanning for Construction Mapping Application (9278)

Saiful Wazlan Wahab, Muhammad Nur Hidayat Zahari, Aziman Madun, Mohd Noor Isa and Azlim Khan (Malaysia):
Detection and Characterization of Pipe Using Time-Domain Reflection Wave (9481)

Lorenz Schmid, Nino Kracher and David Salido-Monzú (Switzerland):
Development and Evaluation of a Geodetic Measurement System for IMU-Based High-Precision Azimuth Transfer (9456)

TS02G: RESTORING RIGHTS IN RISK ZONES AND AGRICULTURAL REGIONS

TUESDAY, 8 MAY 11:00–12:30

VENUE: ÜSKÜDAR HALL 2, ISTANBUL CONGRESS CENTER

COMMISSION: 7

CHAIR: MR. DANIEL PAEZ, COLOMBIA

RAPPORTEUR: MS. PAULA DIJKSTRA, NETHERLANDS

Dimo Todorovski (Netherlands), **Jean Guillaume Manirakiza** (France), **Jaap Zevenbergen** and **Luc Boerboom** (Netherlands): The Role of Land Records in Support of Post-Conflict Land Administration within overall State Building – the Case of Rwanda (9206)

Lina María González, Luis Ángel Guzmán, Luis Eduardo Yamín and **Ricardo Camacho** (Colombia): The Influence of Land Use Planning on Disaster Risk Due to Natural Hazards: Bogotá, Case of Study. (9649)

Sandra Rodríguez, Daniel Paez and **Ricardo Camacho** (Colombia): Analysis of the Multipurpose Cadastre Use for Risk and Disaster Management in Colombia (9650)

Beckhee Cho (Republic of Korea): The Nation Land Capacity Building Model for Informatization – an ICT based model to strengthen human resource capacity for the sustainability of land administration modernization projects (9677)

Zhihong Zhang (China, PR): Comprehensive Land Consolidation as a Tool for Rural Restructuring: Lessons from MHPFP in Jiangsu, China (9694)

TS02I: THE INTERSECTION OF LAND VALUATION AND REAL ESTATE INFRASTRUCTURE

MONDAY, 7 MAY 16:00–17:30

VENUE: CAMLICA HALL, ISTANBUL CONGRESS CENTER

COMMISSION: 9

CHAIR: MR. STEVEN NYSTROM, UNITED STATES

RAPPORTEUR: MR. VASILY NILIPOVSKIY, RUSSIAN FEDERATION

Harun Tanrivermis and **Yesim Aliefendioglu** (Turkey): Management of Commercial Real Estate and Analysis of Main Management Problems of Commercial Real Estate: the Example of Shopping Mall Investments in Ankara Province (9667)

Sergey Volkov and **Vasily Nilipovskiy** (Russia): Institutional Changes in the Russian Market of Land and Real Estate (9698)

Fiona Mannix (United Kingdom): Unlocking the Natural Capital Premium in International Land Valuation (9357)

Gert M. Henningsen (Denmark): Expropriation of Land Rights for Implementation of Mega Infrastructure Projects – the Case of the Fehmarn Belt Connection Between Denmark and Germany (9644)

Bayram Uzun and **Nida Celik Simsek** (Turkey): Finding Comparable Urban Land for the Valuation Purposes: Challenges and Solution Offers (9580)

Abdullah Kara, Ümit Işıkdag, Volkan Çağdaş (Turkey), **Peter van Oosterom, Christiaan Lemmen** (Netherlands) and **Stubbjær Erik** (Denmark): Towards Turkish LADM Valuation Information Model Country Profile (9575)

TS02J: PROJECT, CONSTRUCTION AND RISK MANAGEMENT

MONDAY, 7 MAY 16:00–17:30

VENUE: MACKA HALL, ISTANBUL CONGRESS CENTER

COMMISSION: 10

CHAIR: ING. ROBERT SINKNER, CZECH REPUBLIC

RAPPORTEUR: MR. RUYA FADASON, NIGERIA

Olufisayo Adewumi Adedokun, Isaac Olaniyi Aje and **Oladele Johnson Agboola** (Nigeria): Appraising Risk Mitigating Measures for Building Projects in Rivers State, Nigeria (9179) *This is a peer reviewed paper.*

Isaac O Aje, Olufisayo A Adedokun and **Wasiu O Igbalaye** (Nigeria): Appraising the State of Procurement Methods on Educational Building Projects in Abuja, Nigeria (9207)

Deborah Oluwafunke Adedokun and **Oladele Johnson Agboola** (Nigeria): Identifying Key Significant Factors Predisposing Building Projects to Risks in Rivers State, Nigeria (9231)

Olufemi Oyedele (Nigeria): A Study of Control Measures of Building Collapse in Lagos State, Nigeria (9284)

VOLUNTEER COMMUNITY SURVEYOR PROGRAM (VCSP) ROUNDTABLE (UN-HABITAT GLTN & FIG YSN)

MONDAY, 7 MAY 16:00–17:30

VENUE: ÜSKÜDAR HALL 3, ISTANBUL CONGRESS CENTER

CHAIR: MS. EVA-MARIA UNGER, AUSTRIA

RAPPORTEUR: GLTN

This session is a continuation of the previous High Level Session VCSP. During this session it is all about the Future of the Volunteer Program, which was a small-scale, short-term pilot that helped GLTN/UN-Habitat and FIG YSN to learn how a large-scale program might work in practice. The session also aims to build collaboration with private stakeholders and universities for a possible large-scale program.

TRADITIONAL TURKISH EVENING – FIG FOUNDATION DINNER

MONDAY, 7 MAY 19:00–00:00

VENUE: MILITARY MUSEUM

The foundation of the Military Museum, which is one of the leading museums of the world in terms of the richness of its collections, dates back to the 15th century, though not in the modern sense. After Istanbul was conquered by the Turks in 1453, the Saint Irene Church was organized as a ‘Cebehane’, an armory, in which valuable war armaments, tools and equipment were stored. In 1726, all the materials in Cebehane were reorganized and a new foundation, called ‘Dar-ül Eshihâ’, the Place of Arms, was established. The foundations of Turkish museology were laid down in 1846 by the efforts of Artillery Marshall Ahmet Fethi Pasha and this date has become the foundation of Turkish museology and the Military Museum for the first time in a real sense.

A four-course delicious Turkish dinner menu will be served during the dinner. Unforgettable moments with good music and traditional shows will be waiting for you with the amazing atmosphere of the Museum.

Registration is required. Tickets available for purchase from the Registration Desk.



Tuesday, 8 May

PLENARY SESSION 2 – MODERN TECHNOLOGY USAGE FOR OUR PROFESSION

TUESDAY, 8 MAY 09:00–10:30
VENUE: ÜSKÜDAR HALL 1, 2 & 3, ISTANBUL CONGRESS CENTER
CHAIR: MR. MIKAEL LILJE, FIG VICE PRESIDENT

Dr. **Juergen Dold**, President, Hexagon Geosystems: Transformation through Digitalisation

Mr. **See Lian Ong**, Chair, FIG Commission 10: ICMS – Global Consistency in Measurement and Reporting Construction Cost

Mr. **Charles K. Toth**, 2nd Vice President, ISPRS: Smart Cities

AFRICA CAPACITY DEVELOPMENT NETWORK – BREAKFAST MEETING

TUESDAY, 8 MAY 07:45–08:45
VENUE: MACKA HALL
CHAIR: DR. DIANE DUMASHIE, UNITED KINGDOM

Tea and poğaç served for the FIG 2018 networking meeting of African Land professionals with the following objectives: to overview activities through out the term 2015–18, celebrating our hosts from Kenya, Ivory Coast and Rwanda; to engage with our key partners including Africa YSN to hear about the 2018 workshop proposal from Botswana; and to discuss the next term ARN leadership from South Africa and Ghana.

FIG FOUNDATION MEETING

TUESDAY, 8 MAY 07:00–08:45
VENUE: YILDIZ 3
CHAIR: MR. JOHN HOHOL, FIG FOUNDATION PRESIDENT

EDITORIAL BOARD MEETING – PEER REVIEW

TUESDAY, 8 MAY 08:00–09:00
VENUE: YILDIZ 1, ISTANBUL CONGRESS CENTER
CHAIR: PROF. VOLKER SCHWIEGER, GERMANY

- By invitation only

Tuesday, 8 May 2018 11:00–12:30

FIG YOUNG SURVEYORS: THE FUTURE OF OUR NETWORK.

TUESDAY, 8 MAY 11:00–12:30
VENUE: EMIRGAN HALL 2, ISTANBUL CONGRESS CENTER
COMMISSION: YOUNG SURVEYORS
CHAIR: MS. EVA-MARIA UNGER, AUSTRIA
RAPPOORTEUR: MS. MELISSA HARRINGTON, UNITED STATES

The FIG YSN, established as a Network in 2006, is “young” and growing. Throughout its third term, the FIG YSN aim was to build a sustainable Network. One large change over the past four years was the election process and term for the Chair of the FIG YSN from four years, to two which was decided at the FIG Working Week 2017 in Helsinki. These changes have built a strong foundation and therefore we would like to review the achievements of the FIG YSN over the past four years, and look ahead to the future and future agenda of the FIG YSN.

FIG DIRECTOR GENERALS FORUM

TUESDAY, 8 MAY 11:00–12:30
VENUE: BEYLERBEYI HALL 2, ISTANBUL CONGRESS CENTER
CHAIR: MR. ARVO KOKKONEN, FINLAND

The Rapid Technological Development Challenges the Management/Leadership

In line with the overall theme of the Congress, the DG Forum this year will focus on the role of National Geospatial Agencies today and in the future. We are sure that this theme, even though broad, is valid and could create some good discussions. The Forum allows peer-to-peer engagement to address the challenges and opportunities of the times including the responsibility of national agencies to stay relevant and effective within its jurisdiction.

At the Director General Forum there will be three introductory presentations to inspire the discussions.

Arvo Kokkonen, Moderator and Director General & Chief Executive (Finland): The Possibilities of Robotisation and Automated Decision Making, Case Finland (9714)

John Kedar, Ordnance Survey (United Kingdom): Future National Geospatial Agencies: Shaping their Contribution to Society and the Sustainable Development Goals (9648)

Brent Jones, ESRI (USA): Perspectives on Artificial Intelligence and Robotization (9715)

- By invitation only

FIG MEMBER ASSOCIATION FORUM

TUESDAY, 8 MAY 11:00–12:30
VENUE: CAMLICA HALL, ISTANBUL CONGRESS CENTER
CHAIR: PROF. MUZAFFER KAHVECI, TURKEY
RAPPOORTEUR: MR. MUHITTIN IPEK, TURKEY

The 2018 FIG Member Associations Forum provides national leaders of our Profession the opportunity for peer-to-peer engagement to exchange share and discuss current and in-country challenges and opportunities facing the Profession. Presidents, Chairpersons, Heads of Delegations (or their representatives) representing FIG Member Associations at the 41st FIG General Assembly can interact and exchange experiences, initiatives and programmes that aimed at uplifting professional stature and standing, and allowing the Profession to enhance its significance and relevance within its jurisdiction.

- By invitation only

TS03A: SUSTAINABILITY / INTERNATIONAL BOUNDARIES

TUESDAY, 8 MAY 11:00–12:30
VENUE: EMIRGAN HALL 1, ISTANBUL CONGRESS CENTER
COMMISSION: 1
CHAIR: MS. ROBYN MCCUTCHEON, AUSTRALIA
RAPPOORTEUR: DR. BRIAN COUTTS, NEW ZEALAND

Arabelle Dada-Amos, Marc Gervais and Jacynthe Pouliot (Canada): Current Practices of Land Surveyors: part of Sustainable Development? (9474)

Gary Strong (United Kingdom): Why an International Standard on Fire Safety (IFSS) is Needed (9395)

Cecilie Ravn-Christensen and Kenneth Norre (Denmark): The Role of the Private Land-Related Sector in Supporting the 2030 Global Agenda (9309)

Buddhi N Shrestha (Nepal): Case Study : International Boundary Survey and Demarcation of South-eastern portion of Nepal with India (9297)

FIG PLATINUM MEMBER SESSION – LEICA GEOSYSTEMS

TUESDAY, 8 MAY 11:00–12:30
VENUE: HAMIDIYE HALL, ISTANBUL CONGRESS CENTER
CHAIR: DR. CRAIG HILL, SWITZERLAND

The latest innovations from Leica Geosystems

With a history that goes back almost 200 years, Leica Geosystems has developed many innovative world firsts that are used by Surveyors every day to make their daily tasks more productive. This presentation will include the latest world first innovations from Leica Geosystems... when it has to be right.

- Presenters:**
- Dr. Craig Hill
 - Mr. Felix Puls



GLTN PROFESSIONAL CLUSTER MEETING

TUESDAY, 8 MAY 12:30–14:00
VENUE: YILDIZ 3, ISTANBUL CONGRESS CENTER
CHAIR: PROF. DR. CHRYSY POTSIOU, FIG PRESIDENT

The GLTN Professional Cluster has 13 members and is currently led by FIG. In this meeting the current and future GLTN cluster activities will be discussed.

- By invitation only
- Bring your lunch

TS03C: LAND ADMINISTRATION SYSTEM – SIM – BIM – 3D MODELS

TUESDAY, 8 MAY 11:00–12:30

VENUE: BEYLERBEYI HALL 1, ISTANBUL CONGRESS CENTER

COMMISSION: 3

PROF. HARTMUT MÜLLER, GERMANY

RAPPORTEUR: PROF. PIETRO GRIMALDI, ITALY

Alias Abdul Rahman, Hairi Karim (Malaysia), **Ali Jamali** (Iran), **Gurcan Buyuksalih** and **Serdar Bayburt** (Turkey):

Conceptual Framework Towards Unified 3D Topological Modelling and Visualization Based on CityGML (9250)

This is a peer reviewed paper.

Elena Busch (Norway), **Maria Ovdii** (Moldova) and **Helge Onsrud** (Norway):

Ten Years of Norwegian Assistance to the Land Sector in Moldova: Assessment of the Results Sustaining Achievement of the Sustainable Development Goals (9308)

Khalid Ahmed Alkalbani, Alias Abdul Rahman (Malaysia), **Talal Al-Awadhi** and **Fuad Alshannaq** (Oman):

Implementing 3D Spatial Data Infrastructure for Oman – Issues and Challenges (9416)

Aygün İrem Yavuz, İsmail Hakan Erden and **Gülşen Öztürk** (Turkey):

Ministry of Food, Agriculture and Livestock – General Directorate of Agricultural Reform – Control/Confirmity Screen of Geographic Information Systems Application (9417)

Isaac Olorunfemi Adedurin (Nigeria):

3D Digital Map: The Bases for all Security Intelligence Data Bank (9618)

Cromwell Manaloto (Italy):

BDI Project: The Socioeconomic Impact of Valuation Comparable Analysis in GIS (9652)

TS03E: MULTI-GNSS

TUESDAY, 8 MAY 11:00–12:30

VENUE: ÜSKÜDAR HALL 1, ISTANBUL CONGRESS CENTER

COMMISSION: 5

CHAIR: DR. SUELYNN CHOY, AUSTRALIA

RAPPORTEUR: MR. BILGEHAN

MAKINCI, TURKEY

Eldar Rubinov, Julia Mitchell, John Dawson (Australia), **Matt Amos** (New Zealand) and **Phil Collier** (Australia):

Overview of the Australian and New Zealand SBAS Testbed (9545)

Danijel Šugar (Croatia), **Boris Skopljak** (USA) and **Željko Bačić** (Croatia):

Multi-Constellation GNSS Baseline Solutions – a Perspective from the User's and Developer's Point of View (9450)

Gethin Wyn Roberts (Faroe Islands), **Craig Hancock** and **X Tang** (China, PR):

Comparison of Triple Frequency GNSS Carrier Phase and Pseudorange noise using various satellite constellations. (9452)

Zhao Dong Sheng, Craig Hancock (China, PR), **Gethin Roberts** (Faroe Islands)

and **Lawrence Lau** (China, PR): Benefits of Triple-Frequency for Cycle-Slip Detection (9503)

Emine Tanır Kayıkçı, Yasemin Şişman, Selma Zengin Kazancı, Research Assistant, **Cansu Beşel,** Research Assistant, **Seldanur Çelik,** Project Scholar (Turkey)

and **Mesut Demircan,** Research Assistant: Establishment of Regional GNSS Network for Tropospheric Tomography (9533)

Weifang Yang, Jinmei Wang, Haowen Yan, Dean

of faculty of Geomatics, **Wei Guojun** and **Yang Guolin** (China, PR):

On Optimization of Six-Segment Baselines (9449)

TS03G: PROTECTION OF LAND RIGHTS

TUESDAY, 8 MAY 11:00–12:30

VENUE: ÜSKÜDAR HALL 2, ISTANBUL CONGRESS CENTER

COMMISSION: 7

CHAIR: MR. KEES DE ZEEUW,

NETHERLANDS

RAPPORTEUR: MR. HABTEMICAEL WELDEGIORGIS, ERITREA

Okan Yıldız and **Yakup Emre Coruhlu** (Turkey):

Public Restrictions on Transfer of Agricultural Lands in Turkey (9264)

Ludmila Pietrzak and **Pawel Hanus** (Poland):

Protection of the Property Right in Poland (9345)

Nikola Vučić and **Damir Šantek** (Croatia):

Cadastral Survey – the best Way of Cadastre Modernization (9463)

Amir Bar-Maor (Netherlands):

Improving Cadastral Quality Management as a Foundation for Citizen's Trust (9556)

Abdullah Burak Keser and **Fatma Zehra Gülsever** (Turkey):

As a Measure Land Consolidation for Land Management at Rural Areas in Turkey (9614)

Zhihong Zhang (China, PR):

Cultivated Land Protection of New Era Contributes to the Property Rights Reform of the Farmland (9696)

EXHIBITION STAGE

TUESDAY, 8 MAY 11:30 DELAIR



TS03H: WATER, ENERGY AND RESOURCE GOVERNANCE AND USE

TUESDAY, 8 MAY 11:00–12:30

VENUE: ÜSKÜDAR HALL 3, ISTANBUL CONGRESS CENTER

COMMISSION: 8

CHAIR: MR. KWAME TENADU, GHANA

RAPPORTEUR: MS. MARIJE LOUWSMA, NETHERLANDS

Abdelrahman Abueldas (Jordan): Use of Ground Penetrating Radar to Map Subsurface Archaeological Features in Islamic City of Ayla, Aqaba, Jordan (9232)

This is a peer reviewed paper.

Norezzayana Rohaizat and **Mohd Faisal Abdul Khanan** (Malaysia):

Spatio-Temporal Analysis for Monitoring Water Quality of Skudai River, Malaysia (9236)

This is a peer reviewed paper.

Volkan Baser and **Huseyin Atila** (Turkey):

Researching of the Land Use Changing of the Eastern Black Sea Highland of Turkey with Geographical Information System (9318)

Zhengfeng Zhang (China, PR):

Factors Influencing Rural Households' Willingness of Centralized Residence: Comparing Pure and Nonpure Farming Areas in China (9518)

Joseph Osei Ababio and **Kofi Bonsu** (Ghana):

Change Detection Analysis on the Impact of Illegal Mining (Galamsey) in Ghana; Case Study focusing on Land cover Changes in some Selected Districts within the Country. (9636)

Haran Tanrivermis, Yunus Emre Kapusuz and **Akın Ozturk** (Turkey):

Distribution of Farm Lands, Landlessness and Land Acquisition in Rural Areas: Current Situation in and a Model Proposal for Turkey (9670)

TURKISH SPEAKING AND MID ASIAN COUNTRIES WORKSHOP I

TUESDAY, 8 MAY 11:00–12:30

VENUE: MACKA HALL, ISTANBUL CONGRESS CENTER

CHAIR: MR. ORHAN ERCAN, FIG VICE PRESIDENT

Ms. Sonja Dimova, State advisor for NSDI at the Agency for Real Estate Cadastre:

Geodetic, Mapping and Cadastral Activities in the Republic of Macedonia

Prof. Dr. Murat Meha, Director General:

Kosovo Cadastre Land Information System towards Services Oriented Architecture

To be presented by the State Committee on Property Issues: Information System of E-Cadastre Registration of Lands in Azerbaijan

Mr. Abdiev Almaz, Department of Cadaster and Registration of Rights to Immovable property, Kyrgyz Republic:

Improving Land Governance in the Kyrgyz Republic

Mr. Gankhuu Tsevelsodnom, Director General, Agency for Land Administration and Management, Geodesy and Cartography:

The Current Status of Mapping Services in Mongolia

Mr. Jawad Peikar, Chief Executive Officer Afghanistan Independent Land Authority, ARAZI: Institutional Development Programme for Land Administration

Mr. Mehmet Zeki Adli, Director General: Resent developments in Turkish Cadastre

Dr. Malcolm Childress, Executive Director, Land Alliance: Global experiences in Advising and Supporting Land Projects

Tuesday, 8 May 2018 14:00–15:30

FIG STANDARDS NETWORK SESSION

TUESDAY, 8 MAY 14:00–15:30
VENUE: EMIRGAN HALL 1, ISTANBUL CONGRESS CENTER
CHAIR: DR. DAVID MARTIN, FRANCE
RAPPORTEUR: MR. NIC DONNELLY, NEW ZEALAND

The FIG Standards Network meets regularly to discuss relevant standards in the Survey Profession. The terms of reference of the Network are:

- Building and maintaining relations with the secretariats of standardisation bodies
- Proposing priorities on FIG's standardisation activities, including advising the Council on priorities for spending
- Setting up necessary Liaison relationships with standardisation bodies
- Ensuring that lead contacts to Technical Committees etc... are in place
- Maintaining an information flow on standardisation to FIG members, including through the FIG website, and more directly to relevant Commission Officers
- Maintaining the FIG Standardization Guide, and related material on the FIG website
- Working with other NGOs, within the framework of the MOUs signed by the Council
- Advising FIG's officers and members on standardisation activities as necessary.

All those interested in standards and their influence on the surveying profession are cordially invited to attend the meeting.

FIG YSN MAPATHON WITH HOT & YER CIZENLER

TUESDAY, 8 MAY 14:00–15:30
VENUE: EMIRGAN HALL 2, ISTANBUL CONGRESS CENTER
CHAIR: MR. HÜSEYİN CAN ÜNEN, TURKEY
RAPPORTEUR: MS. FERAH PIRLANTA KÖKSAL, TURKEY

Yer Çizenler, partnering with Humanitarian OpenStreetMap Team (HOT), is aiming to improve the base data in Turkey by strengthening the OSM user base, and to provide maps and location based products to vulnerable communities in a humanitarian context. The workshop will consist of a small mapathon covering the basic editing tools on OpenStreetMap followed by visualization and map design using the digitized data on GIS.

Attendees must bring their own laptops and are encouraged to install QGIS (or any other GIS software) beforehand.

FIT-FOR-PURPOSE LAND ADMINISTRATION (UN-HABITAT/GLTN, KADASTER AND FIG)

TUESDAY, 8 MAY 14:00–15:30
VENUE: BEYLERBEYI HALL 2, ISTANBUL CONGRESS CENTER
CHAIR: MR. KEES DE ZEEUW, NETHERLANDS
RAPPORTEUR: MR. DANILO ANTONIO, KENYA

Objectives:

To further sensitize stakeholders on the need for FFP approach to land administration; To identify gaps and challenges, opportunities and appropriate actions in the adoption and implementation of FFP land administration in their own government departments To agree on the next steps and way forward to operationalize the FFP guidelines.

ACHIEVING THE SUCCESSFUL INTRODUCTION OF VALUE-BASED PROPERTY TAXES (WORLD BANK & FIG)

TUESDAY, 8 MAY 14:00–15:30
VENUE: CAMLICA HALL, ISTANBUL CONGRESS CENTER
CHAIR: MR. RICHARD GROVER, UNITED KINGDOM

The World Bank has been undertaking research into value-based property taxation since 2015 examining the factors that are necessary to achieve the successful implementation of reform in this area and the constraints that are likely to frustrate reform. The work has involved examining a number of countries which have experimented with value-based property tax reforms, one of which is Turkey. The session will report on the key findings and initiate a round table discussion about how reform in this area can be progressed.

Richard Grover (United Kingdom):
 Barriers to the Successful Implementation of Property Tax Reforms (9413)

Umit Yildiz and **Tugba Gunes** (Turkey):
 Data: The Unhidden Mystery of Turkish Property Valuation System (9243)

Ruud Kathmann (Netherlands):
 Factors for Success of the Netherlands System (9723)

TS04C: BEST PRACTICES 3D CADASTRES

TUESDAY, 8 MAY 14:00–15:30
VENUE: BEYLERBEYI HALL 1, ISTANBUL CONGRESS CENTER
COMMISSION: 3 & 7 – WG 3D
CHAIR: MR. ALIAS ABDUL RAHMAN, MALAYSIA
RAPPORTEUR: MR. ABDULLAH KARA

In this session the FIG publication 3D Cadastres Best Practices is presented. At the end of the two most recent 4-year terms (2010–2014 and 2014–2018) of the joint commission 3 and commission 7 FIG Working Group on 3D Cadastres, it was decided to collect the best known practices in a single FIG publication. Each author will introduce one of the main chapters of best practices.

Peter van Oosterom (Netherlands):
 FIG Publication 3D Cadastres Best Practices (9610)

Dimitrios Kitsakis (Greece), **Jesper Paasch**, **Jenny Paulsson** (Sweden), **Gerhard Navratil** (Austria) and **Nikola Vučić** (Croatia):
 3D Cadastres Best Practices, Chapter 1: Legal foundations (9654)

Efi Dimopoulou (Greece), **Sudarshan Karki** (Australia), **Miodrag Roić** (Croatia), **José-Paulo Duarte de Almeida** (Portugal) and **Charisse Griffith-Charles** (Trinidad And Tobago):
 3D Cadastres Best Practices, Chapter 2: Initial Registration of 3D Parcels (9655)

Peter van Oosterom, **Chrit Lemmen** (Netherlands), **Rod Thompson** (Australia), **Karel Janečka** (Czech Republic) and **Sisi Zlatanova** (Australia):
 3D Cadastres Best Practices, Chapter 3: 3D Cadastral Information Modelling (9656)

Karel Janečka (Czech Republic), **Sudarshan Karki** (Australia), **Peter van Oosterom** (Netherlands), **Sisi Zlatanova** and **Mohsen Kalantari** (Australia):
 3D Cadastres Best Practices, Chapter 4: 3D Spatial DBMS for 3D Cadastres (9657)

Jacynthe Pouliot (Canada), **Claire Ellul** (United Kingdom), **Frédéric Hubert** (Canada), **Chen Wang** (China, PR) and **Abbas Rajabifard** (Australia):
 3D Cadastres Best Practices, Chapter 5: Visualization and New Opportunities (9658)

EXHIBITION STAGE

TUESDAY, 8 MAY
12:30
TRIMBLE

**EXHIBITION STAGE**

TUESDAY, 8 MAY
13:30
ESRI



TS04E: GNSS PPP AND NETWORKS

TUESDAY, 8 MAY 14:00–15:30

VENUE: ÜSKÜDAR HALL 1, ISTANBUL CONGRESS CENTER

COMMISSION: 5

CHAIR: PROF. DR. **I. OZTUG BILDIRICI**, TURKEY

RAPPORTEUR: DR. **LEONID LIPATNIKOV**, RUSSIAN FEDERATION

Yang Gao (Canada): Precise GNSS Positioning for Mass-Market Applications (9374)

Ibrahim Murat Ozulu, Veli İlçi, Serdar Erol and Reha Metin Alkan (Turkey): Kinematic PPP Positioning Using Different Processing Platforms (9535)

Seyda Geliskan, Cevat Inal, Sercan Bulbul and Ahmet Mete Gunduz (Turkey): The Comparison of Accuracies of Results Obtained from Bernese v5.2 Software and Web-Based PPP Services (9431)

Viktor Mihoković, Luka Zalović and Danijel Šugar (Croatia): Single Base RTK Solutions Obtained Individually with GALILEO and Beidou as Well as in Combination with Other Fully Operational GNSS (9263)
This is a peer reviewed paper.

Xiaoguang Luo, Stefan Schaufler, Matteo Carrera and Ismail Celebi (Switzerland): High-Precision RTK Positioning with Calibration-Free tilt Compensation (9407)

Burhaneddin Bilgen, Cevat Inal and Sercan Bulbul (Turkey): The Effect of Session Duration in Determination of Point Movements with GNSS (9429)

TS04F: DEFORMATION ANALYSIS I

TUESDAY, 8 MAY 14:00–15:30

VENUE: HAMIDIYE HALL, ISTANBUL CONGRESS CENTER

COMMISSION: 6

CHAIR: DR. **CHRISTOPH STRECHA**, SWITZERLAND

RAPPORTEUR: DR. **CEMAL OZER YIGIT**, TURKEY

Sinan Altinisik, Company Owner and **Semih Seckin Kavlak**, Photogrammetry Section Director (Turkey):
By Means of UAV-based Photogrammetry, Observing, Analyzing and Reporting of the Big Construction Projects, Ethiopia Application (9209)
This is a peer reviewed paper.

Serdar Bora Sayin, Caner Guney and Murat Kendir (Turkey): Semantic Mapping and Reasoning Approach for Mobile Robotics (9245)

Mehmet Ozan Fakioglu, Hakan Karabork, Fatih Esirtgen and Ahmet Guntel (Turkey): The Impact of Different Seamline Production Methods on the Production of Orthophoto Mosaic in Agriculture and Forestry Areas (9313)

Akram Affi and Ahmed El-Rabbany (Canada): Improved Mapping Solution Using Terrestrial Laser Scanners and Low-Cost UAV Images (9332)

Francis Xavier Ochieng, Craig Mathew Hancock (China, PR), **Gethin Wyn Roberts** (Faroe Islands), **Julien Le Kernec** (United Kingdom) and **Xu Tang** (China, PR):

Novel Non-Contact Deformation Health Monitoring of Towers and Rotating Composite Based Wind Turbine Blades Using Interferometric Ground Based Radar (9482)

Cemal Ozer Yigit, Ahmet Anil Dindar, Mert Bezioglu (Turkey) and **Ahmed El-Mowafy** (Australia): Evaluation of High-Rate GNSS-PPP for Monitoring Structural Health and Seismogeodesy Applications (9512)

TS04G: BEST PRACTICE MODELS IN LAND ADMINISTRATION

TUESDAY, 8 MAY 14:00–15:30

VENUE: ÜSKÜDAR HALL 2, ISTANBUL CONGRESS CENTER

COMMISSION: 7

CHAIR: DR. **GLENDON GEORGE ST WALFORD NEWSOME**, JAMAICA
RAPPORTEUR: MR. **LIBOR TOMANDL**, CZECH REPUBLIC

Satrio Muhammad Alif, Agung Pandi Nugroho and Bambang Edhi Leksono (Indonesia): Application of Multipurpose Cadastre to Evaluate Energy Security of Land Parcel (Case Study: Gedung A and Gedung B, Institut Teknologi Sumatra) (9312)

Duc-Mau Ngo (Viet Nam): Towards Utilising Volunteered Geographic Information for Land Administration in Vietnam: Stakeholder Perspectives (9352)

Tsitsi Muparari (Zimbabwe), **Walter T. de Vries** (Germany) and **Jaap Zevenbergen** (Netherlands): Equilibration of Cadastre and Land Registry Components in a Cadastral Merger (9567)

Marisa Balas, Simao Joaquim, José Almeirim Carvalho, Jose Murta and João Carrilho (Mozambique): SiGIT Land Information System and the Challenges Imposed by the Fit For Purpose Approach to Land Administration (9582)

Ayako Oide and Hiroyuki Hasegawa (Japan): Applicability of Social Tenure Domain Model and 3D modeling by UAV photogrammetry to mountainous region in Indonesia (9633)

Ahmad Sghyyer and Rami Farraj (Israel): Field Surveying Inspection Using Tablets (9659)

TS04H: LAND USE PLANNING SYSTEMS AND POLICIES

TUESDAY, 8 MAY 14:00–15:30

VENUE: MACKA HALL, ISTANBUL CONGRESS CENTER

COMMISSION: 8

CHAIR: MR. **IONUT SAVOIU**, ROMANIA
RAPPORTEUR: MR. **EDWIN ADDO TAWIAH**, GHANA

David Goodwin and James Berghan (New Zealand): A Planning Model to Incorporate Socially-Based Tenure Principles into Mainstream Planning, (9267)
This is a peer reviewed paper.

Marije Louwsma (Netherlands): Towards a New Legislative Framework for Spatial Planning – the Environment and Planning Act (9321)

Jian Lin, Bing Zhao and Yu Gan (China, PR): Retrospect and Prospect of Comprehensive Land Use Planning in China (9436)

Fazil Nacar and Nuri Erdem (Turkey): The New Butunsehir (whole City) that are Thought to be Established and Administrative Border Recommendations: the Example of Osmaniye (9493)

Burcu Sari, Tayfun Kaya and Nazim Akkoyun (Turkey): Spatial Strategic Plan as Data Production and Management Process Experience: Kadıköy Example (9578)

TURKISH SPEAKING AND MID ASIAN COUNTRIES WORKSHOP II

TUESDAY, 8 MAY 14:00–15:30

VENUE: MACKA HALL, ISTANBUL CONGRESS CENTER

CHAIR: MR. **ORHAN ERCAN**, FIG VICE PRESIDENT

Continuation of Session 1.



Tuesday, 8 May 2018 16:00–17:30

TS05A: COMMISSION 1 AND THE FUTURE

TUESDAY, 8 MAY 16:00–17:30
VENUE: EMIRGAN HALL 1, ISTANBUL CONGRESS CENTER
COMMISSION: 1
CHAIR: DR. **BRIAN COUTTS**, NEW ZEALAND
RAPPORTEUR: MR. **GARY STRONG**, UNITED KINGDOM

Brian Coutts (New Zealand) and **Winnie Shiu** (Hong Kong SAR, China):

The Case for Commission 1 (9594)

Robyn McCutcheon (Australia): Status of Women in the Spatial Industry (9472)

Shrtee Singh Shrestha, Raja Ram Chhatkuli and Rabindra Tamrakar (Nepal): Reforming Land Transaction Service Delivery to Support Gender Responsive Land Governance in Nepal (9555)

Nigel Sellars (United Kingdom): What does it Mean to be a Surveyor in the 21st century? – Bringing Confidence to the Users of Surveying Related Activities (9424)

TS05B: INNOVATIVE EDUCATION AND TRAINING IN PURSUIT OF ADVANCEMENT IN SURVEYING PROFESSION

TUESDAY, 8 MAY 16:00–17:30
VENUE: EMIRGAN HALL 2, ISTANBUL CONGRESS CENTER
COMMISSION: 2
CHAIR: DR. **DAVID MITCHELL**, AUSTRALIA
RAPPORTEUR: PROF. **JENNIFER WHITTAL**, SOUTH AFRICA

Ismat Elhassan (Saudi Arabia): Towards a Modern Surveying Engineering Curriculum: Case presented is Surveying Engineering Program at King Saud University (9301)

Marinus De Bakker (Netherlands): How to Update a Geo-Information Curriculum? Process and Content to Be Attractive for New Students and Useful for the Labor Market (9379)

Pierre-Yves Gilliéron, Bertrand Merminod and Jérôme Zufferey (Switzerland): Training in Mapping Changes on Archaeological Site (9469)

Peter Wasström (Sweden): Coordinated Mentor/training Program (9587)

TS05C: DEVELOPING 3D MODELS FOR A 3D WORLD

TUESDAY, 8 MAY 16:00–17:30
VENUE: BEYLERBEYI HALL 1, ISTANBUL CONGRESS CENTER
COMMISSION: 3 & 7
CHAIR: MR. **PETER VAN OOSTEROM**, NETHERLANDS
RAPPORTEUR: MR. **GYULA IVAN**, HUNGARY

Barbara Cemellini (Netherlands), **Thompson Rod** (Australia), **Marian de Vries** and **Peter van Oosterom** (Netherlands): Visualization/dissemination of 3D Cadastral Information (9591)

Wilson Phillips, Gabriel Arancibia and Hal Janes (Canada): The 3D Cadastre for Underground Infrastructure: An Integrated, Reliable and Safety proposal from Land Surveyors in Canada (9605)

Chan Keat Lim, Teng Chee Hua and David Kean Beng Loo (Malaysia): Proposed Legislation for 3D Cadastre in Malaysia (9608)

Pietro Grimaldi (Italy): StereoFot: on-line photogrammetric restitutor (9674)

Marco De Carolis (Italy): SMART City 3D – “The digitization of the territory aimed at the processes of knowledge, protection, development and transformation”. (9675)

Valens Frangez, Benjamin Kramis, Florian Hübscher and Andreas Baumann (Switzerland): Comparison of Three Innovative Technologies for 3D-Acquisition, Modelling, and Visualisation of an Underground Mine (9502)

TS05D: HYDROGRAPHY AND DISASTER MANAGEMENT

TUESDAY, 8 MAY 16:00–17:30
VENUE: BEYLERBEYI HALL 2, ISTANBUL CONGRESS CENTER
COMMISSION: 4
CHAIR: MR. **CHRIS A. EKPO**, NIGERIA
RAPPORTEUR: MS. **ANGELA ETUONOVBE**, NIGERIA

Dirk Kowalewski, CEO and **Frank Heinen**, Software engineer (Germany): siNafa: Safety Navigation for Shipping (9181)

Adam Lyszkowicz and Anna Bernatowicz (Poland): Geocentric Sea Level Changes at Tide Gauge Station in Władysławowo (9350)

Ibrahim Öztug Bildirici, Ramazan Alpay Abbak and Sevgi Boge (Turkey): The Accuracy of SRTM Water Body Data over the Turkish Territory with Respect to Topographic Maps (9372)

TS05E: FUTURE OF POSITIONING

TUESDAY, 8 MAY 16:00–17:30
VENUE: ÜSKÜDAR HALL 1, ISTANBUL CONGRESS CENTER
COMMISSION: 5
CHAIR: MR. **MIKAEL LILJE**, SWEDEN
RAPPORTEUR: DR. **YASEMIN SISMAN**, TURKEY

Volker Schwieger (Germany): Positioning for Autonomous Driving (9688)

Allison Kealy, Professor (Australia): Robust Positioning in Indoor Environments (9689)

Suelynn Choy (Australia): GNSS Positioning: From High-end to Mass-market (9690)

Li Zhang (Germany): Low-Cost GNSS for Geodetic Applications (9691)

Martin Lidberg, Head of section, Reference frames (Sweden): Role of Reference Frames in a Dynamic World (9692)

FIG CORPORATE MEMBERS MEETING

TUESDAY, 8 MAY 16:00–17:30
VENUE: YILDIZ 3, ISTANBUL CONGRESS CENTER
CHAIR: PROF. DR. **CHRYSSY POTSIUO**, FIG PRESIDENT

The 2018 FIG Corporate Members Meeting is where the corporate membership within FIG meets the FIG Administration to exchange information, provide feedback and discuss on-going and proposed activities

TS05F: DEFORMATION ANALYSIS II

TUESDAY, 8 MAY 16:00–17:30
VENUE: HAMIDIYE HALL, ISTANBUL CONGRESS CENTER
COMMISSION: 6
CHAIR: MS. MARIA JOAO HENRIQUES, PORTUGAL
RAPPORTEUR: MR. DEREK SPALTON, UNITED KINGDOM

Carlos Becker (Switzerland), **Nicolai Hani** (USA), **Elena Rosinskaya**, **Emmanuel d'Angelo** and **Christoph Strecha** (Switzerland): Machine-Learning Classification of Aerial Photogrammetric 3D Point Clouds (9340)

Derek Spalton (United Kingdom): Control in LASER Scanning of Coastal Erosion at Happisburgh, North Norfolk, UK (9362)

Hasan Bilgehan Makineci and **Hakan Karabörk** (Turkey): Elevation Value Enhancement on Digital Elevation Model with Combined Ascending and Descending SAR Data (9378)

Asli Sabuncu and **Haluk Ozener** (Turkey): Evaluating and Comparing NDVI and NBR Indices Performance for Burned Areas in Terms of PBIA and OBIA in Aegean Region Turkey (9387)

Vassilios Pagounis, **Stavros Vlizos**, **Maria Tsakiri** (Greece), **Cem Conmez** and **Nusret Demir** (Turkey): The Use of Geodetic Techniques in the Documentation of an Archaeological Excavation Site (9515)

Aiham Hassan, **Jinjun Xu**, **Li Zhang**, **Guanlan Liu**, **Annette Schmitt**, **Cheng Xing**, **Yaming Xu**, **Chenhao Ouyang** (China, PR) and **Volker Schwieger** (Germany): Towards Integration of GNSS and GB-SAR Measurements: Exemplary Monitoring of a Rock Fall at the Yangtze River in China (9551)

TS05G: MONITORING AND ASSESSMENT OF CADASTRAL DATA

TUESDAY, 8 MAY 16:00–17:30
VENUE: ÜSKÜDAR HALL 2, ISTANBUL CONGRESS CENTER
COMMISSION: 7
CHAIR: PROF. MIODRAG ROIC, CROATIA
RAPPORTEUR: MR MARTIN ANDREE, SWEDEN

Omer Yurdakul, **S. Savas Durduran** and **Ibrahim Kalayci** (Turkey): General Evaluation of Cadastre of Turkey in the Framework of Cadastre 2034 Vision: Sarioglan District/Konya (9397)

Markus Seifert (Germany): Web-based Validation of Cadastral Data in Germany (9399)

Carline Amsing and **Paula Dijkstra** (Netherlands): An Evaluation of Fit-For-Purpose Land Administration Initiatives at Kadaster International (9404)

Zeynel Abidin Plat, **Hicret Gursoy Surmeneli** and **Mehmet Alkam** (Turkey): Bibliometric Analysis of Articles Presented Under Commission 7: a Case of the 25th Fig Congress in Malaysia in 2014 (9490)

Ntonjira Lizahmy (Kenya): Analyzing the Extent to Which Land Ownership Records Are Updated, case of Maua Sub-County in Kenya. (9522)

Anders Svensson (Sweden): Information Quality – A Critical Success Factor How to make it all right! (9553)

Christiaan Lemmen, **Peter Van Oosterom**, **Eva-Maria Unger**, **Mohsen Kalantari** and **Kees De Zeeuw** (Netherlands): Exploring Possible Standardization of Processes in the Land Administration Domain Model (9554)

TS05H: URBAN PLANNING AND CITIES DEVELOPMENT

TUESDAY, 8 MAY 16:00–17:30
VENUE: ÜSKÜDAR HALL 3, ISTANBUL CONGRESS CENTER
COMMISSION: 8
CHAIR: MS. YVONNE SOWAH, GHANA
RAPPORTEUR: MR. MUHAMMAD MANSUR KABIR, NIGERIA

Abubeker Mohammed (Ethiopia): Land Expropriation for Cooperative Housing in Amhara Region, Ethiopia: Process and Impacts on the Peri-Urban Farming Communities (9235)

Kamil Eren, **Erdal Yilmaz** and **Fahri Kartal** (Turkey): Development of Geospatial Smart Cities and Management (9304)

Nihat Kandaloglu (Turkey): Allocation of Ownership in the Urban Regeneration (9468)

Rong (Rosy) Liao (China, PR): The Logic of “Urban and Rural Integration” in the Process of Urbanization in China Based on the Theory of “Push and Pull” (9693)

Şükran Yalpir, **Süleyman Şişman** and **Ali Utku Akar** (Turkey): The Effects of Urban Transformation on Real Estates and Land Valuation at City Plans (9626)

TS05I: LAND VALUATION METHODOLOGIES EMBRACING TECHNOLOGICAL CHANGE

TUESDAY, 8 MAY 16:00–17:30
VENUE: ÇAMLICA HALL, ISTANBUL CONGRESS CENTER
COMMISSION: 9
CHAIR: MR. STEVEN NYSTROM, UNITED STATES
RAPPORTEUR: MR. DAVID SMEJKAL, CZECH REPUBLIC

Carlos Brett (Venezuela) and **Isaac Boateng** (United Kingdom): Alternative Approach and Toolkits for Economic Valuation of Ecosystem Services of Wetlands: an Application to Farlington Marshes, UK (9222)
This is a peer reviewed paper.

Ayşe Yavuz Ozalp and **Halil Akinci** (Turkey): Using Hedonic Pricing Model to Analyze Parameters Affecting Residential Real Estate Value in Artvin City Center (9536)

Rabia Bovkir, **Ismail Colkesen** and **Arif Cagdas Aydinoglu** (Turkey): Calculating Land Values by Using Advanced Statistical Approaches in Pendik (9632)

Mehmet Ertas (Turkey): The Effect of Bad Neighborhood to the Shops in Mall (9342)

Ruud Kathmann and **Marco Kuijper** (Netherlands): What Is the Quality of Your Valuation Data? (9368)

TS05J: ROUNDTABLE DISCUSSION ON BIM

TUESDAY, 8 MAY 16:00–17:30
VENUE: MACKA HALL, ISTANBUL CONGRESS CENTER
COMMISSION: 10
CHAIR: PROF. CHRISTIAN CLEMEN, GERMANY
RAPPORTEUR: MR. SEE LIAN ONG, MALAYSIA

Review of the Pre-Workshop “BIM for Surveyors”
 Report by **Christian Clemen**
 Open BIM-Microphone
 Discussion lead by **See Lian Ong**

FIG COMMISSIONS ANNUAL MEETINGS

TUESDAY, 8 MAY 17:30–18:30
VENUE: ISTANBUL CONGRESS CENTER

The FIG Commissions are responsible for pursuing FIG’s professional and technical objectives and are the backbone of the professional work in FIG.

The Commission meetings are open for everyone who are interested in the work. After the meeting each commission hosts a dinner. Join the meetings in following rooms:

- Comm. 1: **EMİRGAN 1**
- Comm. 2: **EMİRGAN 2**
- Comm. 3: **BEYLERBEVİ 1**
- Comm. 4: **BEYLERBEVİ 2**
- Comm. 5: **ÜSKÜDAR 1**
- Comm. 6: **HAMİDİYE**
- Comm. 7: **ÜSKÜDAR 2**
- Comm. 8: **ÜSKÜDAR 3**
- Comm. 9: **ÇAMLICA**
- Comm. 10: **MAÇKA**

FIG COMMISSION DİNNERS

TUESDAY, 8 MAY 19:00–00:00
VENUE: VARIOUS

For details of Commission Dinners see information board.

Wednesday, 9 May

Wednesday, 9 May 2018 11:00–12:30

**PLENARY SESSION 3 –
RURAL DEVELOPMENT****WEDNESDAY, 9 MAY 09:00–10:30****VENUE:** ÜSKÜDAR HALL 1, 2 & 3,
ISTANBUL CONGRESS CENTER**CHAIR:** PROF. **CHRISTIAAN
LEMMEN**, FIG HONORARY MEMBER

Dr. **Michael Klaus**, Director of the Hanns Seidel Foundation (HSS):
Rural Development for Achieving the Sustainable Development Goals: Fostering the Rural-Urban Interrelationshi

Mr. **Jawad Peikar**, Chief Executive Officer, Afghanistan Independent Land Authority [ARAZI]GIRoA:
Learning from Best Practices: Towards a Sustainable Land Administration System in Afghanistan

Prof. Dr. **Mehmet Babaoğlu**, Member of Parliament, Parliamentary Commissioner for Agriculture, Forestry and Rural Affairs:
Approach for Accelerating Rural Development in Turkey

**BEST PRACTICE FOR
LAND CONSOLIDATION
LEGISLATION IN LINE WITH
VGGT (FAO & FIG)****WEDNESDAY, 9 MAY 11:00–12:30****VENUE:** EMIRGAN HALL 2, ISTANBUL
CONGRESS CENTER**CHAIR:** MR. **MORTEN HARTVIGSEN**,
DENMARK**RAPPORTEUR:** MR. **MAXIM GORGAN**,
HUNGARY

During this session, FAO will present an overview of its land consolidation programme from 2000 and onwards including lessons learned and way forward. The special focus of the session will be on the land consolidation legislation and the promotion of the VGGT principles through legal work. FAO REU is currently conducting a regional study on land consolidation legislation in Europe to identify best practice. The session will build on the preliminary outcome of the study.

Morten Hartvigsen (Hungary):
FAO Support on Land Consolidation in Europe and Central Asia During 2000–2018. Lessons Learned and Way Forward (9707)

Tomas Versinkas (Lithuania):
FAO Regional Study on Land Consolidation Legislation (9708)

Maxim Gorgan (Hungary):
Experiences with Developing Land Consolidation Legislation in Ukraine (9709)

Kristina Mitic – Arsova (Macedonia, FYR):
Experiences with Developing Land Consolidation Legislation in Macedonia (9710)

**EGOS GENERAL ASSEMBLY –
SESSION 1****WEDNESDAY, 9 MAY 11:00–12:30****VENUE:** EMIRGAN HALL 1, ISTANBUL
CONGRESS CENTER

- By invitation only

**SOCIAL TENURE DOMAIN
MODEL – DEVELOPMENT
AND APPLICATION (FIG YSN
& UN-HABITAT GLTN)****WEDNESDAY, 9 MAY 11:00–12:30****VENUE:** BEYLERBEYI HALL 2, ISTANBUL
CONGRESS CENTER**CHAIR:** MR. **TEO CHEE HAI**, FIG
HONORARY PRESIDENT**RAPPORTEUR:** MS. **EVA-MARIA UNGER**,
AUSTRIA

The Session will involve key champions of STDM presenting conceptual and technical features of STDM tool, sharing of practical and training experiences, sharing next steps and way forward, feedback and open discussions.

Objectives:

- Introduce participants to the basic concepts of STDM
- Provide technical updates on STDM development including key features
- Share country experiences on STDM application of the tools
- Discuss different roles of key partners and proposed strategies for support
- Explore next steps and way forward.

Programme:

- **Christiaan Lemmen** (Netherlands)
STDM Concepts and Rationale
- **John Gitau**, GLTN
STDM Technical Implementation
- **Danilo Antonio**, GLTN
Implementation of STDM at Country-Level
- **Eva-Maria Unger**, YSN
Young Surveyors Network Support to STDM Implementation through VCSP
- **Open Discussion**
Oumar Sylla, Head, GLTN Secretariat
- Closing

**TS06C: TOPOGRAPHY – VGI –
OPEN DATA****WEDNESDAY, 9 MAY 11:00–12:30****VENUE:** BEYLERBEYI HALL 1, ISTANBUL
CONGRESS CENTER**COMMISSION:** 3**CHAIR:** MR. **CROMWELL MANALOTO**,
ITALY**RAPPORTEUR:** MR. **DANIELE
BRANCATO**, ITALY

Christian Kaul, Jürg Lüthy and **Markus Luginbühl** (Switzerland):
Benefits of OGD for Providers of Authoritative Data (9461)

Ulrika Dahlberg (Sweden):
Is It Necessary to Have the Same Information in Several/multiple Official Register (9505)

Arif Cagdas Aydinoglu and **Rabia Bovkir** (Turkey):
Management of Big Geographical Data for Smart City Applications (9525)

Torben Juulsager (Denmark):
Report on the Impact of Open Geographical Data – Danish Effect Studies (9603)

Hartmut Mueller and **Ulrike Klein** (Germany):
The Surveyor and the Geo-Data Management (9613)

Zainal A Majeed, State Director of Surveying and Mapping (Malaysia):
Geographical Names: Detailing Map and Enhancing GIS (9641)

TS06E: GRAVITY AND GEOID**WEDNESDAY, 9 MAY 11:00–12:30****VENUE:** TKGM – ÜSKÜDAR HALL 1,
ISTANBUL CONGRESS CENTER**COMMISSION:** 5**CHAIR:** DR. **DANIEL ROMAN**, UNITED
STATES**RAPPORTEUR:** MR. **EROL UYSAL**,
TURKEY

Andreas Engfeldt, Martin Lidberg, Marcin Sekowski, Przemyslaw Dykowski, Jan Krynski (Poland), **Jonas Ågren, Per-Anders Olsson, Henrik Bryhske, Holger Steffen** (Sweden) and **Jens Emil Nielsen** (Denmark):
RG 2000 – the New Gravity System of Sweden (9495)

Julio Neira and **Cristian Carrasco** (Chile):
A Geoid Model of Northern Chile from Airborne and Surface Gravity (9189)

Kevin Ahlgren, Yan-Ming Wang, Xiaopeng Li and **Monica Youngman** (USA):
Towards a More Consistent Geoid Model for North America (9619)

Suresh Singh and **Rajiv Srivastava** (India):
Development of Geoid Model – A Case Study on Western India (9496)

S.K. Singh (India):
Towards A New Vertical Datum For India (9497)

Mohd Noor Isa, Azhari Mohamed, Sohaime Rasidi, Zulkafli Chihat and **Abd. Majid A Kadir** (Malaysia):
Geoid Based Height System for East Malaysia (9529)

Oyedokun Abiodun, Joseph Odumosu, Abdulmumin Oyekanbi and **Soliu Yusuff** (Nigeria):
Analysis of the Performance of Two Gravimetric Reduction Schemes (9225)

R. Alpay Abbak, I. Oztug Bildirici and **H. Tuba Arli IL** (Turkey):
Comparison of SRTM and ASTER DEM to the Prediction of the Mean Gravity Anomaly (9572)

TS06H: RURAL DEVELOPMENT AND LAND USE

WEDNESDAY, 9 MAY 11:00–12:30
VENUE: ÜSKÜDAR HALL 3, ISTANBUL CONGRESS CENTER
COMMISSION: 8
CHAIR: DR. MICHAEL KLAUS, CHINA
RAPPORTEUR: MR. KINGSLEY SAM, GHANA

Kingsley Sam (Ghana):
 The Critical Role of Land Sector Professionals in Delivery Cost Effective Solutions for the Management of Customary Lands in Ghana. the Case of the Kumasi Traditional Authority. (9299)

Wioleta Krupowicz and Anna Bielska (Poland):
 Sustainable Development of Rural Areas in Poland in the Context of 'urban Sprawl' Process (9351)

Mwenda Makathimo and Lizahmy Ntonjira (Kenya):
 An Analysis of Community Land Use Planning System in Kenya. (9426)

Fahria Masum and Michael Klaus (Germany):
 Balancing Urban and Rural Development – How to Reach the Goal? (9430)

Linlin Dai (China, PR), **Karine Dupre** (Australia), **Dong Li** and **Ling Yang** (China, PR):
 Reconstruction and Transition Driven by External Capital: a Case Study of Simatai Village in Beijing Suburbs (9521)

TS06I: THE PROPERTY MANAGEMENT, PLANNING AND ADMINISTRATION OF REAL ESTATE ASSETS

WEDNESDAY, 9 MAY 11:00–12:30
VENUE: CAMLIÇA HALL, ISTANBUL CONGRESS CENTER
COMMISSION: 7, 8 & 9
CHAIR: MR. JAMES KAVANAGH, UNITED KINGDOM
RAPPORTEUR: PROF. RACHELLE ALTERMAN, ISRAEL

Sezen Tarakçı and Şevkiye Şence Türk (Turkey):
 Impact of Planning on Land Value In Urban Renewal Practice: The Case Of Istanbul- Fikirtepe (9316)

Wiwin Ambarwulan, Tri Patmasari, Theresia Wulan, Titiék Suparwati and Sri Lestari (Indonesia):
 Application of Remotely Sensed Satellite Imagery for Village Boundary Mapping in Indonesia : Case study in Hulu Sungai Tengah Regency, South Kalimantan, Indonesia (9539)

Rachelle Alterman (Israel):
 Condominium Apartments as a Challenge to Urban Regeneration: A comparative view of laws and practices (9620)

James Kavanagh (United Kingdom):
 The Connectivity of Land Valuation, Land Transfer Standards (ILMS) and Land Acquisition/taxation – Integrating Fit for Purpose Principles Along the Land Continuum (9353)

Ali Fahri Ozten and Baransel Izmirli (Turkey):
 Routing and Expropriation Process and Costs in the Iran-Turkey-Europe Gas Pipeline Project (9635)

Mehmet Alkan, Hicret Gursoy Surmeneli and Zeynel Abidin Polat (Turkey):
 Design and Determine Cadastral and Land Management Performance of Turkey with Cadastre 2034 Vision (9489)

TS06J: CONSTRUCTION TECHNOLOGY AND INNOVATIONS

WEDNESDAY, 9 MAY 11:00–12:30
VENUE: MACKA HALL, ISTANBUL CONGRESS CENTER
COMMISSION: 10
CHAIR: MR. SEE LIAN ONG, MALAYSIA
RAPPORTEUR: PROF. CHRISTIAN CLEMEN, GERMANY

Chan KH (Hong Kong SAR, China):
 Embracing a Smarter World through Better Outsourcing (9195)

Ayodeji Oke, Clinton Aigbavboa and Mpho Ndou (South Africa):
 Promoting Sustainable Construction Projects through Ecological Economics (9211)

Krishna Mochtar (Indonesia):
 Construction Material and Equipment Demand Estimation in Indonesia (9266)

Martin Andrée, Jesper Paasch, Jenny Paulsson and Stefan Seipel (Sweden):
 BIM and 3D Property Visualisation (9367)

Rya Tambaya Fadason, Lot Akut Kaduma and Danladi Zakari Chitumu (Nigeria):
 Challenges of Building Information Modeling Implementation in Africa: A Case Study of the Nigerian Construction Industry (9589)

Alojz Kopáčik, Ján Erdélyi and Tomáš Funtik (Slovakia):
 The Implementation of BIM in Slovakia – State of the Art (9627)

FIG PLATINUM MEMBER SESSION – ESRI

WEDNESDAY, 9 MAY 11:00–12:30
VENUE: HAMIDIYE HALL, ISTANBUL CONGRESS CENTER
CHAIR: MR. BRENT JONES, UNITED STATES

Modernized Land Administration Systems Off-the-Shelf GIS Technology for Modern Cadastral Operations

Gone are the days of building highly customized cadastral systems with siloed disparate technologies. They're too expensive to maintain and they don't keep up with all the new capabilities that GIS provides. ArcGIS is a complete, interoperable, open, and purpose-built system for cadastral operations to improve efficiency, manage data integrity, and share data across your organization and with the public. Whether you aim to improve data quality, increase throughput, or improve spatial accuracy, become more transparent – the ArcGIS platform delivers necessary capabilities from fit-for-purpose to enterprise cadastral systems.



EXHIBITION STAGE

WEDNESDAY, 9 MAY 11:30

BEYLİKDÜZÜ



EXHIBITION STAGE

WEDNESDAY, 9 MAY 12:30

LEICA



EXHIBITION STAGE

WEDNESDAY, 9 MAY 13:30

TRIMBLE



Wednesday, 9 May 2018 14:00–15:30

**ROUND TABLE ON
SECURING TENURE RIGHTS,
SURVEYING AND THE VGGT
(FAO & FIG)****WEDNESDAY, 9 MAY 14:00–15:30****VENUE:** EMIRGAN HALL 2, ISTANBUL
CONGRESS CENTER**CHAIR:** MR. **MORTEN HARTVIGSEN**,
DENMARK

The Round Table will discuss how the implementation of the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests (VGGT) is fundamental to securing tenure rights (in the various tenure regimes), the role of surveying to secure those rights and how they complement each other. By discussing some country experiences, the Round Table will look into ways by which the VGGT can be used to improve surveying protocols and standards so that this can be done in effective and efficient manner, speeding up the tenure regularization process. Concept Note

Javier Molina Cruz (Italy):
Setting the Stage: Implementation of the VGGT at Country Level, Lessons Learned and Challenges (9703)

Anne-Pierre Girardin (France):
The Role of Surveying in Tenure Regularization Under Different Tenure Regimes: Lessons Learned, Challenges. Bringing the Gender Dimension into the Process. (9704)

Lussuga Kironde (Tanzania):
Experience from the Field: Surveying Community Land in Tanzania (9705)

Sean Gregory Johnson (Swaziland):
Community Participation in the Surveying Process: How to Engage Surveyors and the Communities (9706)

**EGOS GENERAL ASSEMBLY
– SESSION 2****WEDNESDAY, 9 MAY 14:00–15:30****VENUE:** EMIRGAN HALL 1, ISTANBUL
CONGRESS CENTER

- By Invitation only

**LAND TENURE, CLIMATE
VULNERABILITY AND
ADAPTIVE CAPACITY
(UN-HABITAT/GLTN, RMIT
AND FIG)****WEDNESDAY, 9 MAY 14:00–15:30****VENUE:** ÜSKÜDAR HALL 1, ISTANBUL
CONGRESS CENTER**CHAIR:** TBC**RAPPORTEUR:** MR. **DANILO ANTONIO**,
KENYA

The overall objective of this session is to enable participants to better understand the concepts of land tenure, climate vulnerability and adaptive capacity and how this informs their work. At the end of the training, participants will be able to:

- Describe the concepts of land tenure, climate vulnerability and adaptive capacity and how they interrelate
- Understand how adaptation options can either enhance or reduce tenure security
- Decide what improvements to land governance and tenure security are needed to reduce vulnerability and enhance adaptive capacity.

**ISS 1: GIS APPLICATION
& MAPPING FOR PUBLIC
DELIVERY****WEDNESDAY, 9 MAY 14:00–14:30****VENUE:** MACKA HALL, ISTANBUL
CONGRESS CENTER**COMMISSION:** ISS – INSPIRATIONAL
SESSION**CHAIR:** DR. **DIANE DUMASHIE**, UNITED
KINGDOM**Cecilair Baywood-Chukwuma**

(Nigeria):

Developing a Geospatial Database for Public Secondary School Facilities In Umuahia North L.G.A, Abia State, Nigeria (9194)

Erkan Tin, Ekin Çapçı, Ali Toksoy, Onur Lenk and Mahir Güney (Turkey):

Regularization of Geospatial Procedures by Process Modelling & Management Tools (9257)

Pasi Laurila (Finland):

Mine Surveying in Finland – Education and Professional Practices (9310)

Jonas Lundsten and Jesper Paasch (Sweden):

Individual's Motivation in Standardization of Geographic Information (9364)

Tuncer Ozerbil, Engin Pekel, Dilvin Caneli Tugrul, Cihan Sezgin and Osman Selcuk (Turkey):

GIS Application in Technical and Environmental Safety of Natural Gas Transmission Pipelines, a Case Study (9519)

**ISS – INSPIRATIONAL
SHORT SESSIONS**

In the Inspirational Short Sessions the presentations are short, sharp and specific, hence maximize information and idea gathering. Following the inspiring presentations there will be a lively discussion. The representatives have 5 minutes for their presentation. The session chair will afterwards encourage a discussion and ask strategic questions.

**TS07C: GEO-DATA
MANAGEMENT AND LAND
INFORMATION SYSTEM****WEDNESDAY, 9 MAY 14:00–15:30****VENUE:** BEYLERBEYI HALL 1, ISTANBUL
CONGRESS CENTER**COMMISSION:** 3**CHAIR:** MR. **ROBERTO CAPUA**, ITALY**RAPPORTEUR:** DR. **ENRICO RISPOLI**,
ITALY**Emmanuel Rotimi****Adegboyega and Williams**

Oluwole Adebayo (Nigeria):
Geospatial Information for Sustainable Forest Management in Ekiti State (9398)

Mohd Noor Isa, Siti Nurbaiduri**Mohd Yusof and Sarah**

Shaharuddin (Malaysia):
BIM Implementation in Malaysia: A Case Study in Department of Survey and Mapping Malaysia (9477)

John Gitau, Danilo Antonio**and Oumar Sylla** (Kenya):

Low-Cost Land Information System for Sustainable Urban Development: Case Examples in Kenya and Zambia (9528)

Madan Mohan (India):

Geoinformatics in Real World's Regional Million+ Cities: A Geospatial Study of Urbanisation in Emerging and Developing Country, India (9547)

Kazimierz Beczek (Turkey):

Introducing the Latest Version of the Global Elevation Testing Facility (9559)

Arzu Erener and Gülcan**Sarp** (Turkey):

Spatiotemporal distribution of Industrial Regions and Impact on LST in the case of Kocaeli, Turkey (9639)

TS07E: REFERENCE FRAMES**WEDNESDAY, 9 MAY 14:00–15:30****VENUE:** ÜSKÜDAR HALL 1, ISTANBUL
CONGRESS CENTER**COMMISSION:** 5**CHAIR:** PROF. DR. **MUZZAFFER KAHVECI**,
TURKEY**RAPPORTEUR:** MS. **LI ZHANG**, GERMANY

Basara Miyahara, Director,
Toshihiro Yahagi, Director,
Satoshi Kawamoto, Executive Officer,
Yudai Sato, Research Officer and
Koji Matsuo, Researcher (Japan):
Geodetic Reference Frame of Japan as Basic Infrastructure Enabling Us Precise Gns Positioning (9381)

Graeme Blick (New Zealand):

Joining New Zealand's Land and Sea Vertical Datums (9338)

Daniel Roman (USA):

United States NSRS 2022: Terrestrial Reference Frames (9457)

Nic Donnelly and Miriam

Broadbent (New Zealand):
A Single Adjustment of all New Zealand's Geodetic Observations (9410)

Irem Yakar (Turkey):

Height System Modernization and Geoid Modelling Studies In Turkey (9254)

This is a peer reviewed paper.

TS07F: FRENCH SESSION I

WEDNESDAY, 9 MAY 14:00–15:30

VENUE: HAMIDIYE HALL, ISTANBUL CONGRESS CENTER

CHAIR: MR. **MARC VANDERSCHUEREN**, BELGIUM

RAPPORTEUR: MS. **GODELIVE PHANZU VANGU**, CONGO, DEMOCRATIC REPUBLIC OF THE

Jean-Yves Pirlot (Belgium):

Une réglementation intelligente de la profession de géomètre-expert (9672)

Jean-François Dalbin, President (France):

Analyse et réflexion sur les méthodologies et pratiques de formalisation des droits fonciers (9686)

Léopold Degbegnon (Benin):

Etude sur la dynamique foncière au Bénin (9673)

Khalid Yousfi (Morocco):

Dématérialisation des services destinés aux géomètres-experts au Maroc (9679)

Bertand Juompan (France):

Contribution du géomètre à la connaissance du patrimoine et à la prévention des dommages aux réseaux enterrés et de leurs conséquences (9680)

Francis Gabele (Belgium):

Valeur hypothécaire des immeubles de logement (9681)

Mourad Maroc (Algeria):

Conservation Et Valorisation Du Patrimoine pour un Développement Durable de la Région du Tassili Najjer (9725)

TS07G: 3D RELATIONSHIP IN LAND MANAGEMENT

WEDNESDAY, 9 MAY 14:00–15:30

VENUE: ÜSKÜDAR HALL 2, ISTANBUL CONGRESS CENTER

COMMISSION: 7

CHAIR: ASSOC. PROF. **LEIV BJARTE MJOS**, NORWAY

RAPPORTEUR: **CHRIS**

WILLIAMS-WYNN, SOUTH AFRICA

Fisnik Loshi (Kosovo):

From 2D Representation of the Buildings into Cadastral Maps towards 3D GIS Applications and BIM – a Case Study for Prishtina (9283)

This is a peer reviewed paper.

Sedat Bakici, Bilal Erkek, Levent

Ozmus, Ekrem Ayyildiz and

Metin Soylu (Turkey):

3D City Models for Land Administration in Turkey (9285)

Yasemin Kuleyin (Turkey):

Three Dimensional Condominium Installation Methodology (9322)

Lin Li, Haihong Zhu, Jindi

Wu and Yuan Lei (China, PR):

Spatial Representation of the Ownership Structure of Condominium Units (9346)

TS07H: RESILIENCE PLANNING AND DISASTER RISKS

WEDNESDAY, 9 MAY 14:00–15:30

VENUE: ÜSKÜDAR HALL 3, ISTANBUL CONGRESS CENTER

COMMISSION: 8

CHAIR: MR. **MUHAMMAD MANSUR KABIR**, NIGERIA

RAPPORTEUR: MR. **KWAME TENADU**, GHANA

Himmet Karaman and Gözde

Bakioglu (Turkey):

Hospital Accessibility of Istanbul Following an Earthquake (9343)

Christine Atuhaire and John

Richard Otukey (Uganda):

Assessing impact of Settlement Expansion on Green Space Cooling Intensity: Case study – Kampala Metropolitan Area (9433)

Penjani Hopkins Nyimbili

and **Turan Erden** (Turkey):

Current Landscape of Spatial Decision Support Systems (SDSS) and Software Applications for Earthquake Disaster Management in Turkey (9443)

Turen Erden, Penjani Hopkins

Nyimbili and Himmet

Karaman (Turkey):

Earthquake Hazard Mapping and Analysis by Integrating GIS, AHP and TOPSIS for Küçükçekmece Region in Turkey (9444)

Stephen Djaba and Atta Priscilla

Djaba (Ghana):

Application of Remote Sensing to Monitor Thermal Emission: A Case Study of Accra Metropolitan Area (9663)



Wednesday, 9 May 2018 16:00–17:30

**FIG YOUNG SURVEYORS:
MENTORING TOOLKIT****WEDNESDAY, 9 MAY 16:00–17:30****VENUE:** EMIRGAN HALL 2, ISTANBUL CONGRESS CENTER**COMMISSION:** YOUNG SURVEYORS
CHAIR: MS. EVA-MARIA UNGER, AUSTRIA**RAPPORTEUR:** MS. MELISSA HARRINGTON, UNITED STATES

This session will introduce a key part of our future, the FIG YS Mentoring Toolkit. This guide has been developed following two workshops organised by the FIG Young Surveyors Network held at the FIG Working Weeks in Christchurch, New Zealand and Helsinki, Finland.

This toolkit presents an overarching view of mentoring with accompanying resources and templates. It is envisaged that participants of the FIG YSN Mentoring Program will use these concepts and tools when establishing formal and informal mentoring programs and relationships. It is designed to bring a consistent approach to mentoring across FIG to ensure best practice is achieved for this very important component of professional development. We will have a look at each component that was considered in the development of this mentoring program and toolkit.

- Leadership and Structure
- Coordination
- Selection of Mentors
- Selection of Mentees
- The Mentoring Relationship
- Review and Evaluation

REGIONAL BODIES FORUM**WEDNESDAY, 9 MAY 16:00–17:30****VENUE:** SAIT HALIM PAŞA MANSION (MEET AT 15:20 BY THE REGISTRATION DESKS)**CHAIR:** NSPS

* By invitation only

EGOS GENERAL ASSEMBLY**WEDNESDAY, 9 MAY 16:00–17:30****VENUE:** EMIRGAN HALL 1, ISTANBUL CONGRESS CENTER

• By Invitation only

**LAUNCH OF 'VALUATION OF
UNREGISTERED LANDS:
A POLICY GUIDE'
(UN-HABITAT, FIG AND RICS)****WEDNESDAY, 9 MAY 16:00–17:30****VENUE:** CAMLICA HALL, ISTANBUL CONGRESS CENTER**CHAIR:** MR. STEVEN NYSTROM, UNITED STATES
RAPPORTEUR: MR. JOHN GITAU, KENYA

The policy guide is intended for valuation practitioners, land professionals, policy makers and stakeholders involved in the valuation of unregistered lands. The global agenda in the guide provides the ethical framework to value unregistered land to ensure equity, ethical considerations and fair valuation judgments, inclusivity and sustainability.

Key objectives:

- To introduce participants to the basic concepts of the 'Valuation of Unregistered Lands: A Policy Guide'
- Solicit comments from participants on their views about the guide
- To formally launch the guide

**TS08C: REMOTE DATA
CAPTURE FOR SECURING
LAND INFORMATION****WEDNESDAY, 9 MAY 16:00–17:30****VENUE:** BEYLERBEYI HALL 1, ISTANBUL CONGRESS CENTER**COMMISSION:** 3 AND 7**CHAIR:** MR. ROBERT W. FOSTER, UNITED STATES**RAPPORTEUR:** PROF. CHARALABOS IOANNIDIS, GREECE

Parastoo Pilehforooshha and **Mohammad Karimi** (Iran): Spatial Conflict Reduction in Building Generalization Process using Optimization Approaches (9274)

This is a peer reviewed paper.

Claudia Stöcker, Mila Koeva, Serene Ho (Belgium), **Rohan Bennett** (Australia), **Placide Nkerabigwi, Cornelia Schmidt** (Rwanda) and **Jaap Zevenbergen** (Netherlands): Towards UAV-based Land Tenure Data Acquisition in Rwanda: Needs Assessment and Technology Response (9428)

Kees de Zeeuw, Paula Dijkstra, Christiaan Lemmen, Eva Maria Unger and **Mathilde Molendij** (Netherlands): Bridging the Security of Tenure Gap: Fit for Purpose Initiatives (9546)

Divyani Kohli, Eva-Maria Unger, Christiaan Lemmen (Netherlands), **Rohan Bennett** (Australia) and **Mila Koeva** (Netherlands): Validation of Automated Feature Extraction for Cadastral Map Creation Using Satellite Imagery: A Case of Nepal (9566)

Roberto Capua (Italy): GNSS in Surveying: State of the Art and Future Perspectives in the Framework of Galileo (9643)

Ziya Usta, Muhammed Emre Yildirim and **Çetin Comert** (Turkey):

Web Based Generation and Management of 3D City Models at Condominium Level (9647)

**TS08E: MODERN SURVEYING
TECHNIQUES AND
APPLICATIONS****WEDNESDAY, 9 MAY 16:00–17:30****VENUE:** ÜSKÜDAR HALL 1, ISTANBUL CONGRESS CENTER**COMMISSION:** 5**CHAIR:** DR. ALLISON KEALY, AUSTRALIA
RAPPORTEUR: DR. DANIEL ROMAN, UNITED STATES

Boris Resnik (Germany): Application of Ultrasonic Measurement on Concrete Foundations of Modern Wind Energy Plants: Approaches and Findings (9251)

Gennady Pobedinskiy and **Alexander Prusakov** (Russia): The Status and Prospect of Creation of the State Geospatial Data of the Russian Federation (9302)

Jonathan Li, Lingfei Ma (Canada), **Yiping Chen** and **Cheng Wang** (China, PR):

3D Point-Based High-Definition Road Maps for Autonomous Driving (9360)

Stefan Wei (China, PR): Mobile Mapping System used in Cadastral Surveying (9631)

Robert Sarib (Australia) and **Graeme Blick** (New Zealand): The Social, Technical, Environmental and Economic Benefits and Opportunities of Accessing and Sharing Geodetic Data (9366)

Bashkim Idrizi (Macedonia, FYR), **Lyubka Pashova** (Bulgaria), **Ismail Kabashi** (Kosovo), **Medzida Mulic, Dzevad Krdzalic** (Bosnia and Herzegovina), **Drazen Tutic, Nada Vucetic, Karlo Kevic** (Croatia), **Gojko Nikolic** and **Radovan Djurovic** (Montenegro): Study of Length Differences from Topography to Map Projection within the State Coordinate Systems for some Countries on the Balkan Peninsula (9602)

**TS08G: TECHNOLOGY MEETS
SOCIAL ASPECTS****WEDNESDAY, 9 MAY 16:00–17:30****VENUE:** ÜSKÜDAR HALL 2, ISTANBUL CONGRESS CENTER**COMMISSION:** 7**CHAIR:** MR. RICHARD GROVER, UNITED KINGDOM
RAPPORTEUR: DR. LUDMILA PIETRZAK, POLAND

Claire Buxton and **Melissa Harrington** (New Zealand): Land Rights – Will Technology Ever Replace the Human Touch? From the Perspective of Millennials (9480)

Sirin Gulcen Eren (Turkey): Ancient Smart Cadastrate: Akarçaytepe Cadastral Map (9527)

Virgo Eresta Jaya and **Dwi Budi Martono** (Indonesia): Participatory Mapping for Cadastrate: a Village Approach (9560)

Wahyuni Widigdo (Indonesia): The Challenge of Implementing the Concept of Open Data for Land Information Acces in Indonesia (9569)

Deniz Yildirim (Turkey), **Maria Vakalopoulou** (France), **Konstantinos Karantzalos** (Greece) and **Oguz Gungor** (Turkey): A Deep Learning Method for Local Climate Zone Classification (9583)

Harun Tanrivermis and **Yesim Aliefendioglu** (Turkey): Land Assets and Tenure Systems in Agricultural Enterprises and an Evaluation of Possibilities of Implementation of Legal Arrangements for the Prevention of the Problem of Land Fragmentation in Turkey (9668)

TS08H: LAND CONSOLIDATION AND RE-ADJUSTMENT IN LAND USE PLANNING

WEDNESDAY, 9 MAY 16:00–17:30

VENUE: ÜSKÜDAR HALL 3, ISTANBUL CONGRESS CENTER

COMMISSION: 8

CHAIR: MS. MARIJE LOUWSMA, NETHERLANDS

RAPPORTEUR: MR. KWAME TENADU, GHANA

Tayfun Çay, Ramazan Yoldaş, Satılmış and Ela Ertunç (Turkey): Economic Analysis of Land Consolidation Projects (9219)

Alexander Sagaydak and Anna Sagaydak (Russia): New Trends in Development of Agricultural Land Consolidation in the Russian Federation (9224)

Atakan Sert, Reha Metin Alkan, Ali Riza Ceylan, Onder Karagoz and Cuneyt Vanli (Turkey):

Social and Economic Monitoring and Evaluation of Land Consolidation Projects After Application (9258)

Bambang Edhi Leksono and Muhammad Ihsan

(Indonesia): Developing Model of Agriculture Land Consolidation as a tool to recover from Industrial Liquid Waste Pollution Hazards. (9311)

Seckin Yilmazer and Onder Saskin (Turkey):

A Comparison Between Current Land Readjustment Implementations in Turkey and Value-Based Approach (9363)

Mevlut Uyan and Sukran

Yalpir (Turkey): Determination and Comparison of Soil Index by Different Interpolation Methods in Land Consolidation Studies: A Case Study (9421)

Yang Lei (China, PR):

Country Revival Practice in China – From Land Consolidation Aspect (9455)

ISS 2: GEODESY AND SURVEYING APPLICATIONS

WEDNESDAY, 9 MAY 16:00–17:30

VENUE: MACKA HALL, ISTANBUL CONGRESS CENTER

COMMISSION: ISS – INSPIRATIONAL SESSION

CHAIR: MR. MIKAEL LILJE, SWEDEN

Murat Yakar, Ali Ulvi and Ahmet Suad Toprak (Turkey): The Use of Unmanned Air Vehicles(UAV) in Observation of Archeological Excavations: the Example of Silifke Castle (9199)

Gozde Bakioglu and Asli Dogru (Turkey): GIS-Based Visualization for Estimating Level of Service (9339)

Mohd Noor Isa, Keat Lim Chan, Muhammad Imzan Hassan, Nur Amalina Zulkifli and Alias Abdul Rahman (Malaysia): 3D Strata Modelling based on Indoor LIDAR Data (9476)

Mohd Noor Isa, Azhari Mohamed, Muhammad Asyran Che Amat (Malaysia) and **Sowter Andrew** (United Kingdom): Joint Analysis of GNSS and InSAR for Deformation Monitoring: A Feasibility Study in Johor, Malaysia (9479)

Milan Trifunovic, Nenad Pasic and Milena Trifunovic (Serbia): The Role of Government Institutions to Encourage the Development of Consciousness on the Use of Spatial Data in the Republic of Serbia (9517)

Sofyan Rachman and Harry Pramudito (Indonesia): Study of Landslide Disaster in Aceh Tamiang Area of Nanggroe Aceh Darussalam Province, Indonesia (9607)

Mustafa Qasim (Iraq) and **Ekrem Tusat** (Turkey): Analysis of the Effect of Data Intervals on GNSS Processing (9629)

Umit Atila, Emrullah Demiral, Yasin Ortakci and Ismail Rakip Karas (Turkey): Network Basics of Indoor Navigation for Smart Evacuation (9638)

Mehmet Buğra Gunaydin, Ömür Engin Demirkol, Fatih Esirtgen, Mehmet Ozan Fakioglu and Özgür Yanıt Kaya (Turkey): Lessons Learned from Turkish LPIS Project: Preparatory Works, Aerial Photography & Production Planning, Organization, Project Execution, Data Management, Internal and External Quality Controls, Risk Assessment and Management (9646)

GALA DINNER

WEDNESDAY, 9 MAY 19:00–00:00

VENUE: BOAT ON BOSPHORUS

Gala Dinner at the Boat on Bosphorus is one of the best ways to discover and enjoy the beautiful Istanbul in the night and also one of the best things to do in Istanbul.

One of the more popular and fantastic forms of entertainment on your Istanbul visit is the dinner on Boat. The cruise begins slightly to the east of the famous Galata Bridge and continues to Anadolu Kavagi which is the Bosphorus' entrance to the Black Sea making numerous sightseeing stops along the strait.

The Boat follows a route that passes historical sites, including Ottoman palaces, and stunning bridges illuminated by night.

A four-course delicious Turkish dinner menu will be served during the dinner. Unforgettable moments with good music and shows will be waiting for you with the amazing atmosphere of Bosphorus.

Registration is required. Tickets available for purchase from the Registration Desk.



Thursday, 10 May

ACCO BREAKFAST MEETING**THURSDAY, 10 MAY 07:00–08:30****VENUE:** YILDIZ 1, ISTANBUL CONGRESS CENTER**CHAIR:** DR. **DIANE DUMASHIE**, UNITED KINGDOM

- By invitation only

PLENARY SESSION 4 – SPATIALLY ENABLED SOCIETIES**THURSDAY, 10 MAY 09:00–10:30****VENUE:** ÜSKÜDAR HALL 1, 2 & 3, ISTANBUL CONGRESS CENTER**CHAIR:** DR. **DANIEL STEUDLER**, FIG HONORARY MEMBER

Dr. **Mika-Petteri Törhönen**, World Bank:
Investing in Fundamental Infrastructure for Spatially Enabled Societies

Prof. **Abbas Rajabifard**, UNGGIM Academic Network, Head of Department of Infrastructure Engineering Director: Spatially Enabled Societies

Dr. **Victor Khoo**, Senior Deputy Director, Singapore Land Authority (SLA):
Towards a Spatially Enabled Smart Nation

USE AND APPLICATION OF STDM – SESSION 1**THURSDAY, 10 MAY 09:00–10:30****VENUE:** EMIRGAN HALL 2, ISTANBUL CONGRESS CENTER**CHAIR:** MR. **JOHN GITAU**, KENYA
RAPPORTEUR: MS. **EVA-MARIA UNGER**, AUSTRIA**Objectives:**

- Introduce GLTN land tools, and in particular the technical aspects, purposes, mainstreaming, adoption and probable piloting and roll out of STDM tool.
- Promote conceptual awareness of the Social Tenure Domain Model (STDM) and its application, at scale.
- Provide an overview of the main functionality of the STDM tool and potential use cases.
- Share country level experience in the tool implementation.
- Encourage interaction and future networking for in-country application of land tools by GLTN and partners.

For more information, please visit www.fig.net/fig2018/stdm.htm

Thursday, 10 May 2018 11:00–12:30

FIG ACADEMIC FORUM ON VGGT (FAO & FIG)**THURSDAY, 10 MAY 11:00–12:30****VENUE:** HAMIĐIYE HALL, ISTANBUL CONGRESS CENTER**CHAIR:** DR. **DAVID MITCHELL**, AUSTRALIA

The 2018 FIG Academic Members Forum is the platform within the 41st FIG General Assembly where the Academic Members of FIG and other academicians gather to discuss about academic responsibilities and prepare actions. This session focuses on the adoption and implementation of The Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security, the VGGT, in the surveying profession and professional education.

FAO will present an overview of the engagement of FAO with the academic sector at country level.

HISTORY SESSION 1 – FLYING HIGH OVER THE ANCIENT WORLD**THURSDAY, 10 MAY 11:00–12:30****VENUE:** EMIRGAN HALL 1, ISTANBUL CONGRESS CENTER**COMMISSION:** HISTORY
CHAIR: MR. **JOHN BROCK**, AUSTRALIA

John Hohol and Curtis Sumner (USA):
A Unique Point on Earth (9188)

John Brock (Australia):
The Distance Slabs of the Antonine Wall: The Surveyors' Record Carved in Stone. (9217)

Yakup Emre Coruhlu, Tugay Toludan, Osman Demir and Okan Yildiz (Turkey):
Development of Data Model for "Buying and Selling" of Immovable Property via UML diagrams (9244)

Tekin Susam and Sengül Dilek Ful (Turkey):
Classification of Archaeological Features from UAV-Based Very High Resolution Images (9609)

ISS 3: EMERGING TRENDS IN MANAGING URBANISATION AND NATURAL RESOURCES**THURSDAY, 10 MAY 11:00–12:30****VENUE:** MAÇKA HALL, ISTANBUL CONGRESS CENTER**COMMISSION:** ISS – INSPIRATIONAL SESSION**CHAIR:** MR. **ROBERT W. FOSTER**, UNITED STATES

Dilek Tezel and Şaban Inam (Turkey):
Determination of Plant Sensitivity In Protected Areas For Land Management:Kaş-Kekova (9213)

Aziz Sisman (Turkey):
Smart Cities Concept and Coverage (9290)

Jing Han, Xin-hai Lu and Xi Yang (China, PR):
Analysis of the Factor Input Constraint on China's Grain Production (9437)

Othman Al-Kherayef (Saudi Arabia), **Vasil Valchinov** (Bulgaria), **Rossen Grebenitcharsky** (Saudi Arabia), **Stanislava Valcheva** (Bulgaria) and **Bandar Al-Muslmani** (Saudi Arabia):
Refraction Coefficient Determination and Modelling over the Territory of the Kingdom of Saudi Arabia (9488)

Celal Bacakci and Guler Yalcin (Turkey):
Land Consolidation in Turkey and Land Consolidation Project at State of Kayseri-Bünyan (9558)

Catherine Kariuki (Kenya):
The Creation of a Land Policy Research Centre: a Way to Strengthen Land Governance and Administrative Institutions (9573)

USE AND APPLICATION OF STDM – SESSION 2**THURSDAY, 10 MAY 11:00–12:30****VENUE:** EMIRGAN HALL 2, ISTANBUL CONGRESS CENTER**CHAIR:** MR. **JOHN GITAU**, KENYA
RAPPORTEUR: MS. **EVA-MARIA UNGER**, AUSTRIA

Continuation of Session 1.

TS09C: GIS AS A CRITICAL TOOL IN DISASTER PREPAREDNESS, RECOVERY AND MANAGEMENT**THURSDAY, 10 MAY 11:00–12:30****VENUE:** BEYLERBEYI HALL 1, ISTANBUL CONGRESS CENTER**COMMISSION:** 3
CHAIR: DR. **JUERG LUETHY**, SWITZERLAND
RAPPORTEUR: PROF. **HARTMUT MÜLLER**, GERMANY

Njike Chigbu, Esther Ogbonyeau Mbah and Ignatius Anyanwu (Nigeria):
Assessment of Flood Risk of Cross River State Using Geographic Information System (GIS). (9276)

Emmanuel Udo Ahuchaogu, Ojinnaka Oliver C. and Nkechi Baywood C. (Nigeria):
Application of Geospatial Techniques for Analysis of River Inundation and Flood Risk Potential along Lower Niger Basin in Nigeria (9327)

Ceren Yagci and Fatih Iscan (Turkey):
Analysis of Earthquake Risk Zones with Geographic Information Systems in Konya/TURKEY (9438)

Sevda Erturk, Murat Demircan and Selda Erdogan (Turkey):
Locating Fire Stations at the Most Convenient Location (9552)

TS09E: GEODETIC ALGORITHMS

THURSDAY, 10 MAY 11:00–12:30

VENUE: ÜSKÜDAR HALL 1, ISTANBUL CONGRESS CENTER

COMMISSION: 5

CHAIR: DR. LEONID LIPATNIKOV, RUSSIAN FEDERATION

RAPPORTEUR: MS. EMEL ZERAY ÖZTÜRK, TURKEY

Gacoki Thomas Gicira (Kenya): Polynomial Transformation of Cassini Coordinates to UTM on the Excel Spreadsheet (9237)
This is a peer reviewed paper.

Ömür Engin Demirkol, Mehmet Ozan Fakioglu, Numan Cakmak and Ahmet Guntel

(Turkey): Definition of a Unique Transformation Parameters for Bursa Metropolitan Municipality Area of Responsibility (9645)

Hamza Alkhatib, Boris Kargoll, Jens-André Paffenholz and Johannes Bureick (Germany): Statistical Evaluation of the B-Splines Approximation of 3D Point Clouds (9634)

Emel Zeray Öztürk (Turkey), **Walyeldeén Godah** (Poland) and **Ramazan Alpay Abbak** (Turkey):

Analysis of De-Correlation Filters Performance for Estimating Temporal Mass Variations Determined from GRACE-Based GGMS over Konya Basin (9625)

Tim Kaiser, Christian Clemen and Robert Kaden (Germany):

Structure from Motion – Quantitative Evaluation of structure from motion software for the 3D-reconstruction of traffic accidents (9534)

Nazan Yilmaz (Turkey): Volume Calculation Through Using Digital Elevation Models Created by Different Interpolation Methods (9335)

TS09G: FIT-FOR-PURPOSE – FIT-FOR-PEOPLE

THURSDAY, 10 MAY 11:00–12:30

VENUE: ÜSKÜDAR HALL 2, ISTANBUL CONGRESS CENTER

COMMISSION: 7

CHAIR: MR. BRENT JONES, UNITED STATES

RAPPORTEUR: MR. CROMWELL MANALOTO, ITALY

Mila Koeva, Sophie Crommelinck (Netherlands), **Claudia Stöcker** (Netherlands) and **Joep Crompvoets** (Belgium): Its4land – Challenges and Opportunities in Developing Innovative Geospatial Tools for Fit-For-Purpose Land Rights Mapping (9425)

Timothy Fella (USA): Delivering Fit-for-Purpose Land Administration (9454)

Janak Raj Joshi, Uma Shankar Pandey, Raja Ram Chhatkuli, Jagat Deuja (Nepal) and **Danilo Antinio** (Philippines): Strategy for Fit for Purpose Land Administration to Implement Proposed Land Policies in Nepal (9485)

Thomas Dabiri (Nigeria): Cadastral Data Infrastructure Building Strategy In Delta State of Nigeria. (9540)

Eva-Maria Unger, Christiaan Lemmen, Divyani Kohli (Netherlands), **Simon Norfolk** (Mozambique) and **Shristi Paudel** (Nepal):

Fit – For Purpose Land Administration – Assessment of efficiency and effectiveness of paper-based and digital data collection Case of Colombia, Mozambique and Nepal (9549)

Paula Dijkstra (Netherlands), **Danilo Antonio** (Kenya), **Raja Ram Chhatkuli** (Nepal), **Wondimagegn Tesfaye Beshah** (Ethiopia) and **Shristee Singh Shrestha** (Nepal): Implementation of Fit For Purpose Land Administration Approaches in Nepal (9550)

TS09H: TECHNOLOGY TRANSFORMING SPATIAL PLANNING

THURSDAY, 10 MAY 11:00–12:30

VENUE: ÜSKÜDAR HALL 3, ISTANBUL CONGRESS CENTER

COMMISSION: 8

CHAIR: MR. EDWIN ADDO TAWIAH, GHANA

RAPPORTEUR: MS. MARIJE LOUWSMA, NETHERLANDS

Agoes Soewandito Soedomo, Bambang Edhi Leksono, Didik Wihardi W. Soerowidjojo, Levana Apriani and Nanin Trianawati Sugito (Indonesia): The Using of Unmanned Aerial Vehicle (UAV) Technology for Land Acquisition in Highway Construction Area (9347)

Bambang Edhi Leksono, Agoes Soewandito Soedomo, Andri Hernandi, Levana Apriani, Atifah Rabbani and Nanin Trianawati Sugito (Indonesia): Land Parcel Mapping with Unmanned Aerial Vehicle (UAV) Technology to Accelerate Land Certification in Cismudawu Highway Construction Area (9354)

Ana Cornelia Badea and Gheorghe Badea (Romania): Advantages of Identifying Urban Footprint using Sentinel-1 (9376)

Maria Henriques, Rute Lemos, Rui Capitaó, Ricardo Jonatas, Fortes Conceicao and Hugo Silva (Portugal): Accessing the Accuracy of Surveying/Photogrammetric Methods Applied to Detect Damages of Physical Models of Rubble Mound Breakwaters (9511)

Adin Adnan Rashid Beg and Lutfiye Karasaka (Turkey): 3D Modeling of Kilistra Ancient City Buildings with Terrestrial Laser Scanning (9537)

Laurence Lee (Ireland): A Field GIS Solution to Derelict Sites and Dangerous Structures Management (9621)

TS09I: MASS APPRAISAL CHALLENGES AND SOLUTIONS FOR A SMARTER WORLD

THURSDAY, 10 MAY 11:00–12:30

VENUE: CAMLICA HALL, ISTANBUL CONGRESS CENTER

COMMISSION: 9

CHAIR: MR. RICHARD GROVER, UNITED KINGDOM

RAPPORTEUR: MR. MANOHAR VELPURI, DENMARK

Sukran Yalpir, Fatma Bunyan Unel and Birol Gulnar (Turkey): Comparison of Factors Affecting the Plot Value According to Participants and Provinces (9498)

Haicong Yu, Xuan Wang and Ying Liu (China, PR): Using Geographic Information System for Land Mass Appraisal – The Application of Standardized Price of Land Appraisal in Shenzhen (9419)

Fatma Bunyan Unel and Sukran Yalpir (Turkey): Sustainable Mass Land Valuation (9439)

Nanin Sugito, Irawan Sumarto, Hendriatiningsih Sadikin and Bambang Leksono (Indonesia): Integration of Market Price Comparison Approach and Income Approach in Urban Land Assessment (9483)

Bülent Bostancı, Hülya Demir and Ahmet İlvan (Turkey): GIS Supported Decision Making Model to Housing Suitability Assessment (9492)

Nida Celik Simsek and Bayram Unuz (Turkey): Land Share Issue in Turkish Condominium Ownership System: Is it a Valuation Problem or not? (9557)

Thursday, 10 May 2018 14:00–15:30

**HISTORY SESSION 2 –
MIEVEAL MEASUREMENTS
IN THE CADASTRES OF
ANTIQUITY****THURSDAY, 10 MAY 14:00–15:30****VENUE:** EMIRGAN HALL 1, ISTANBUL
CONGRESS CENTER**COMMISSION:** HISTORY**CHAIR:** MR. JOHN BROCK, AUSTRALIA**Ramazan Gürsel Hoşbaşı, Atınc Pırtı** and **Ercenk Ata** (Turkey):
Surveying Instruments Used in Roman Civilization (9296)**Mehmet Yıldırım** and **Bilal Curabaz** (Turkey):

Historical Development of Turkish Cadastre: Cadastral works during Ottoman Empire, Legislative Regulations and Reflections to Republic of Turkey (9341)

Adam Lyszkowicz (Poland):

The Ancient Maps of the Salt Mine in Wieliczka (9369)

**STDM CODE SPRINT –
SESSION 1****THURSDAY, 10 MAY 14:00–15:30****VENUE:** EMIRGAN HALL 2, ISTANBUL
CONGRESS CENTER**CHAIR:** MR. JOHN GITAU, KENYA**RAPPORTEUR:** MS. EVA-MARIA UNGER,
AUSTRIA

The session will give a technical overview of the STDM project where participants will be taken through the current status, priorities and roadmap of the project. An orientation to some of the tools and platforms used in the development of STDM will be provided and participants will get hands-on experience on how to report bugs, propose UI/UX improvements and support internationalization of the tool's user interface. Participants will also learn about open source collaboration, development and licensing. At the end of the session, it is expected that young surveyors will have the essential skills to actively engage and contribute to the development of STDM.

Objectives:

- Identify performance bottlenecks and bugs in the STDM tool.
- Propose UI/UX enhancements.
- Internationalization of the user interface by enriching the current translations and incorporating new languages.

For more information, please visit www.fig.net/fig2018/stdm.htm.

**ROUND TABLE ON
PROPERTY FOR WOMEN
IN MUSLIM COUNTRIES
(UN-HABITAT GLTN &
FIG)****THURSDAY, 10 MAY 14:00–15:30****VENUE:** MACKA HALL, ISTANBUL
CONGRESS CENTER**CHAIR:** MRS. GERDA
SCHENNACH, AUSTRIA
RAPPORTEUR: GLTN

Mr. **Rafic Khouri**, Arab Union of Surveyors:
Women and Land in the Muslim World

Mr. **Oumar Sylla**, Head, GLTN Secretariat:
Women and Land Rights in Post Conflict

Roundtable Discussion

Facilitated by Mrs. **Gerda Schennach**, Chair FIG Commission 7

**TS10C: LAND
ADMINISTRATION SYSTEM
– SIM – BIM – 3D MODELS II****THURSDAY, 10 MAY 14:00–15:30****VENUE:** BEYLERBEYI HALL 1,
ISTANBUL CONGRESS CENTER**COMMISSION:** 3**CHAIR:** MR. DANIELE BRANCATO,
ITALY
RAPPORTEUR: DR. MARIA GRAZIA
SCORZA, ITALY

Abbas Rajabifard, Behnam Atazadeh, Mohsen Kalantari and **Ian Williamson** (Australia):

A New Method for Integrating 3D Spatial Information about Vertically Stratified Ownership Properties into the Property Map Base (9241)

This is a peer reviewed paper.

Dragan Divjak, Miodrag Roić and **Doris Pivac** (Croatia):
Towards Sustainable Land Administration Infrastructure in Croatia (9279)

This is a peer reviewed paper.

Hudson Irvibogbe, Monsur Adeware, Wasiu Yusuf and **Mutiu Akitoye** (Nigeria):
Analysing Flood Risk in Lagos Island Local Government Area of Lagos State (9593)

Ekaterina Meskhidze

(Georgia):
“The Importance of NSDI – Case of Georgia” (9662)

**TS10E: GEODETIC RISK
MONITORING****THURSDAY, 10 MAY 14:00–15:30****VENUE:** ÜSKÜDAR HALL 1, ISTANBUL
CONGRESS CENTER**COMMISSION:** 5**CHAIR:** MR. NIC DONNELLY, NEW ZEALAND
RAPPORTEUR: MS. CEREN YAGCI, TURKEY

Gokhan Baskan, Ismail Sanlioglu and **Mustafa Zeybek** (Turkey):

The Investigation of Halabjah/ Iraq Earthquakes Effects From Turkish National Permanent GNSS Network Data (9622)

Mehmet Nurullah Alkan, Volkan Özbey, Hasan Hakan Yavaşoğlu, Reha Metin Alkan (Turkey) and **Frédéric Masson** (France):

Determination of Seismic Activity on the Main Marmara Fault with GPS Measurements (9467)

Chris Pearson (New Zealand), **Kevin Kelly** (USA) and **Paul Denys** (New Zealand):

Feasibility of Developing a Regional Deformation Model for the South Pacific (9289)

This is a peer reviewed paper.

Niraj Manandha (Nepal), **Chris Pearson** (New Zealand), **Puran Chaudhary** (Nepal) and **Paul Denys** (New Zealand):
Progress Towards a Semi-Dynamic Datum for Nepal After the 2015 Gorka Earthquake (9383)

navXperience AWARD WINNER:

Wan Anom Wan Aris, Tajul Ariffin Musa, Kamaludin Mohd Omar (Malaysia) and **Abdullah Hisam Omar** (Malaysia):

Non-Linear Crustal Deformation Modeling for Dynamic Reference Frame: A Case Study in Peninsular Malaysia (9268)

This is a peer reviewed paper.

Aicha Derkaoui and **Messaoud Hacini** (Algeria):

Contribution of Spatial Geodesy in the Seismic Risk Study (9541)

Bongbae Jang, Deputy Director General, **June-Hwan Koh**, Professor, **Chulmin Jun**, Professor and **Sungkil Cho**, Professor (Republic of Korea):

Investigation on Appropriate Surveying Method Following the Establishment of national Disaster Damage Investigation System (9678)

TS10F: FRENCH SESSION II

THURSDAY, 10 MAY 14:00–15:30
VENUE: HAMIDIYE HALL, ISTANBUL CONGRESS CENTER
CHAIR: JEAN-FRANCOIS DALBIN, FRANCE
RAPPORTEUR: DR. LEOPOLD DEGBEGNON, BENIN

Emile Adjoumany Kokoh (Cote D'Ivoire):

L'accès à la propriété foncière en zone urbaine en Côte d'Ivoire (9687)

Marc Vanderschueren (Belgium): La Fédération des géomètres francophones (FGF), plus de dix ans déjà (9682)

Maurice Barbieri, President (Switzerland): Le rôle du géomètre dans la mise en œuvre de projets de réforme foncière (9683)

Godelive Phanzu Bitaka (Democratic Republic of Congo): La durabilité de la profession du géomètre en République Démocratique du Congo (9684)

Luc Lanoy (France): Le relevé du niveau des mers (9685)

TS10G: MODELLING DIVERSITY OF LAND TENURE

THURSDAY, 10 MAY 14:00–15:30
VENUE: ÜSKÜDAR HALL 2, ISTANBUL CONGRESS CENTER
COMMISSION: 7
CHAIR: CHRISTIAAN LEMMEN, NETHERLANDS
RAPPORTEUR: MR. CORNEL PAUNESCU, ROMANIA

Emin Bank (Turkey): How to Build An Ideal Property Information System (9215)

Nelson Marongwe, Hellen Nyamweru and Danilo Antonio (Kenya): Securing Land Rights within the Continuum of Land Rights Approach: Evidence from Tenure Security Innovation in Kenya, Uganda and Zambia (9230)

Abdulvahit Torun (Turkey): Geodata Enabled Hierarchical Blockchain Architecture for Resolving Boundary Conflicts in Cadastre Surveys and Land Registration (9260)
This is a peer reviewed paper.

Cemal Biyik, Fatih Doner and Fatih Berk (Turkey): Turkish Land Management at Historical Process (9447)

Gabriel Arancibia and Chiemeka Ngwu (Canada): The (R)evolution of the Land Registry and Cadastre in Plateau State: Towards an Efficient, Sustainable and Secure Land Governance Solution (9600)

Glendon Newsome (Jamaica) and **Charisse Griffith-Charles** (Trinidad and Tobago): Digital Integration of Land Records through the LADM and STDM (9653)

Harun Tanrivermis, Yesim Aliefendioglu and Salih Demirkaya (Turkey): Problem Definitions and Transformation of Urban Slum Areas and Urban Renewal Policies: A Case Study in Ankara Province, Turkey (9669)

TS10H: URBAN INNOVATIONS AND MOBILITY CHALLENGES

THURSDAY, 10 MAY 14:00–15:30
VENUE: ÜSKÜDAR HALL 3, ISTANBUL CONGRESS CENTER
COMMISSION: 8
CHAIR: MR. CORNEL PAUNESCU, ROMANIA
RAPPORTEUR: MR. IONUT SAVOIU, ROMANIA

Fadim Koc, Fatih Iscan and Ceren Yagci (Turkey): Determination of The Most Suitable Location For Retail Shopping Store By Using Geographic Information Systems Technology: A Case Study of Konya/TURKEY (9434)

Pamela Duran, Tobias Bendzko and Sahinkaya Cemre (Germany): Urban Regeneration in Context of Two Different Planning Approaches: A Case Study of Sulukule (Istanbul, Turkey) and Haidhausen (Munich, Germany) (9440)

Tansu Alkan, S. Savas Durduran and Asli Bozdag (Turkey): The Problems and General Evaluation of the Spatial Address Registry System (SARS) Project in Turkey (9448)

Nuri Erdem and Fazil Nacar (Turkey): The Importance of the Main Transportation Axes in the Reduction of Traffic Density in the Urban: The Example of Osmaniye Province (9494)

Punya Prasad Oli, Sumitra Shrestha and Ashim Babu Shrestha (Nepal): Preparation of Geodatabase for Urban Planning in Nepal (9568)

TS10I: OVERCOMING EXTREME CHALLENGES IN OPAQUE LAND MARKETS

THURSDAY, 10 MAY 14:00–15:30
VENUE: CAMLICA HALL, ISTANBUL CONGRESS CENTER
COMMISSION: 9
CHAIR: PROF. DR. CHRYSY POTSIOU, FIG PRESIDENT
RAPPORTEUR: MR. STEVEN NYSTROM, UNITED STATES

Harun Tanrivermis (Turkey): The Recent Developments of Real Estate and Assets Valuation Studies and Analysis of Fundamental Problems in Turkey (9666)

Odetha Nyarubaji, Felician Komu and Eric Mwaikambo (Tanzania): Addressing Uncertainty in Property Depreciation Rate Estimation Using Fuzzy Logic Modelling (9248)

James Kavanagh (United Kingdom), **Michael McDermott** (Australia) and **Franklin Obeng-Odoom** (Ghana): RICS Research Valuation of Unregistered Land – the Reality of Functioning Informal Land and Property Markets in Ghana, Peru & Indonesia (9365)

Chryssy Potsiou (Greece) and **Steven Nystrom** (USA): UNECE / FIG Guide on Formalizing the Informal Real Estate (9642)

SURVEY REVIEW AWARD WINNER:

Kwabena Asiana (Netherlands), **Rohan Bennett** (Australia), **Jaap Zevenbergen** (Netherlands) and **Seth Asiana** (Ghana): Land Valuation in Support of Responsible Land Consolidation on Ghana's Rural Customary Lands (9214)
This is a peer reviewed paper.

Jim Mason and Hollie Escott, Quantity Surveyor (United Kingdom): Exploring How Smart Contracts Will Impact on the Role of Construction Professionals (9201)
This is a peer reviewed paper.

Benjamin Elder (United Kingdom): Prop-Tech – A Challenge to Valuation as we know it? (9183)

Thursday, 10 May 2018 16:00–17:30

TS11C: GIS – CARTOGRAPHY – AEROPHOTOGRAMMETRY AND REMOTE SENSING

THURSDAY, 10 MAY 16:00–17:30
VENUE: BEYLERBEYI HALL 1, ISTANBUL CONGRESS CENTER
COMMISSION: 3
CHAIR: DR. ENRICO RISPOLI, ITALY
RAPPORTEUR: MR. CROMWELL MANALOTO, ITALY

Evangelos Maltezos, Charalabos Ioannidis, Anastasios Doulamis and Nikolaos Doulamis (Greece): Building Change Detection Using Semantic Segmentation on Analogue Aerial Photos (9252)
This is a peer reviewed paper.

Umut Gunes Sefercik, Serkan Karakis and Can Atalay (Turkey): Roof Modelling Potential of UAV Point Clouds by Laser Scanning (9356)

Fatih Iscan and Ceren Yagci (Turkey): Investigation of the Effect of Transportation Network on Urban Growth by Using Landsat Images and Geographic Information Systems (9441)

Renny Putriyani and G A Putri Saptawati (Indonesia): Analysis of Spatial Data (9445)

ILMS MEETING (INTERNATIONAL LAND MEASUREMENT STANDARDS COALITION)

THURSDAY, 10 MAY 16:00–17:30
VENUE: HAMIDIYE HALL, ISTANBUL CONGRESS CENTER
CHAIR: MR. JAMES KAVANAGH, UNITED KINGDOM

- By invitation only

STDM CODE SPRINT – SESSION 2

THURSDAY, 10 MAY 16:00–17:30
VENUE: EMIRGAN HALL 2, ISTANBUL CONGRESS CENTER
CHAIR: MR. JOHN GITAU, KENYA
RAPPORTEUR: MS. EVA-MARIA UNGER, AUSTRIA

Continuation of Session 1.

TS11E: TERRESTRIAL LASER SCANNING

THURSDAY, 10 MAY 16:00–17:30
VENUE: ÜSKÜDAR HALL 1, ISTANBUL CONGRESS CENTER
COMMISSION: 5 & 6
CHAIR: DR. DAVID MARTIN, FRANCE
RAPPORTEUR: MR. EROL UYSAL, TURKEY

Ephraim Friedli, Jonathan Banz, Zan Gojic and Andreas Wieser (Switzerland): Fusion of Laser Scanning and Photogrammetric Data for the Documentation and VR Visualization of an Archaeological Tomb Complex (9523)

John Laurent, Benoit Petitclerc and Eric Samson (Canada): High Resolution Multi-Lane Road Surface Mapping Using 3D Laser Profilers (9334)

Adil Arslan, Research Assistant (Turkey) and **Asparuh Kamburov**, Assistant Professor (Bulgaria): Application of Terrestrial Lidar for 3D Modelling of the Bulgarian Antarctic Station “St. Kliment Ohridski” (9272)

Asep Yusup Saptari, Hendriatiningsih Sadikin, Dony Bagaskara and Levana Apriani (Indonesia): Three Dimensional Modelling of Building Tangible Assets Using Terrestrial Laser Scanner (9530)

Gintcho Kostov (Bulgaria): Combination of 3D Terrestrial Laser Scanning and GNSS Technologies for Measurement of hard /Impossible/ to Access Objects of Cadastre in the Process of data Acquisition for the Required Update of the Cadastral plan (9513)

TS11G: CADASTRE – TOWARDS A FULLY DIGITAL FUTURE

THURSDAY, 10 MAY 16:00–17:30
VENUE: ÜSKÜDAR HALL 2, ISTANBUL CONGRESS CENTER
COMMISSION: 7
CHAIR: MR. JAMES KAVANAGH, UNITED KINGDOM
RAPPORTEUR: PROF. ANA-CORNELIA BADEA, ROMANIA

Sevkiye Sence Turk (Turkey): Value Capture Capacity of Area-Based Land Readjustment (LR) in Turkey (9306)

Baransel Izmirlı and Ali Fahri Ozten (Turkey): Cadastre and Renewal Problems and Solutions in TRNC (9464)

Gyula Iván (Hungary): Challenges in Technology, Society and Policy – How They Influence Cadastre and Land Management (9499)

Anselm Haanen and Trent Gulliver (New Zealand): A Vision for a Fully Digital Cadastral Survey System – Replacing Plan Images with Data and its Integration into a Complete Digital Cadastral Survey Network (9506)

Brent Jones (USA): Modernizing Land Administration Systems (9451)

TS11H: THE ROLE OF SPATIAL PLANNING IN SUSTAINABLE DEVELOPMENT

THURSDAY, 10 MAY 16:00–17:30
VENUE: ÜSKÜDAR HALL 3, ISTANBUL CONGRESS CENTER
COMMISSION: 8
CHAIR: MR. KWAME TENADU, GHANA
RAPPORTEUR: MS. MARIJE LOUWSMA, NETHERLANDS

Punya Oli (Nepal): Land Use Zoning towards the Fulfillment of the 2030 Agenda for Sustainable Development (9273)

Alena Kasyanenko, Aliaksandr Khizhniak and Uladzimir Tainikau (Belarus): Spatial Planning in Belarus: Towards Achievement of Sustainable Development Goals 2030 (9355)

Abdurrahman Eymen and Bülent Bostancı (Turkey): Assessment of Urban Forests by Using Spatial Decision Support System (9520)

Bazame Rodrigue and Harun Tanrivermis (Turkey): Role of Land Development Institutions in Sustainable Land Use: A Comparative Analysis between Some Selected Nations and Turkey (9665)

Haocong Wang (China, PR): Planning Practicum-Based on Sustainable Development (9695)

Friday, 11 May

FIG PRESIDENT'S MEETING

FRIDAY, 11 MAY 08:30–10:30
VENUE: BEYLERBEYI HALL 1, ISTANBUL CONGRESS CENTER
CHAIR: PROF. DR. CHRYSY POTSIOU, FIG PRESIDENT

This event is convened by the FIG President and is reserved for Presidents or Heads of delegation of Member Associations (or their representatives)

- By invitation only

FIG GENERAL ASSEMBLY – PART 2

FRIDAY, 11 MAY 11:00–15:00
VENUE: ÜSKÜDAR HALL 1, 2 & 3, ISTANBUL CONGRESS CENTER
CHAIR: PROF. DR. CHRYSY POTSIOU, FIG PRESIDENT

FAREWELL RECEPTION, HOSTED BY FIG WORKING WEEK 2019

FRIDAY, 11 MAY 15:30–16:30
VENUE: B2 FOYER, ISTANBUL CONGRESS CENTER

Delegates are invited to farewell the XXVI FIG Congress 2018 and its host city in an informal environment. Join us as we toast to a successful event and at the same time have a taste of FIG Working Week 2019 in Hanoi, Vietnam.

All participants are invited. Hosted by FIG Working Week 2019, Hanoi, Vietnam.

FIG Congress is more than just an event, it is an 'experience'. Participants come for inspiration, ideas and an abundance of business opportunities, and this year we want to have a festive closing of the exhibition, so everyone will leave having had fun yet productive days!

From 16:00 on Thursday 10 May everyone is invited to the exhibition hall where many happenings will take place. At the FIG booth A10 you can meet the FIG Council Members. They will be happy to answer all your questions – or take a photo together with you.

ATELIER OF URBAN ARCHITECTURE



H. HAYRİ İNÖNÜ

Mayor of Sisli

Hayri İnönü



FIG 2018 Istanbul

is TAN BUL

Special Event

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Dance

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FIG THE FIG FOUNDATION

FIG YOUNG SURVEYORS

INTERNATIONAL FEDERATION OF SURVEYORS

FIG INTERNATIONAL FEDERATION OF SURVEYORS

6 MAY 2018 17:00
HILTON BHOSPHORUS BALLROOM

WE WANT TO DO GOOD – and give back.

With this charity dance we will support Humanitarian OpenStreet-Map Team Local Community “Yer Çizenler Herkes İçin Haritacılık Derneği” and FIG Foundation.

THE HUMANITARIAN OPENSTREETMAP TEAM (HOT) applies the principles of open source and open data sharing for humanitarian response and economic development.

FIG FOUNDATION is an independent body under FIG established for raising funds to finance surveying education development projects and supporting young surveyors.

The minimum donation will be 10 EUR.

Purpose of FIG Young Surveyors Network

- To improve the number of young professionals participating within the FIG.
- To help young professionals in the beginning of their careers with contacts.
- To increase co-operation between the commissions and the students and young professionals network.

For more information, see www.fig.net/ys



THE FIG FOUNDATION

The FIG Foundation is an independent body under the International Federation of Surveyors and has been established for the purpose of raising funds to finance surveying education development projects and supporting young surveyors in order to build a sustainable future.

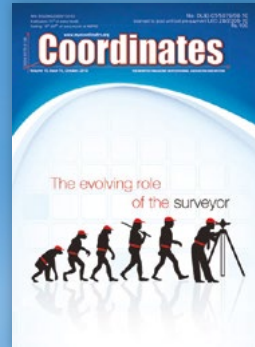
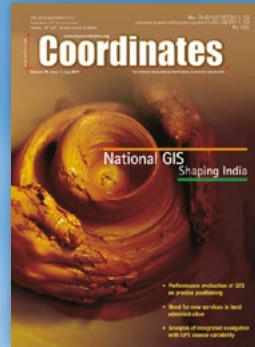
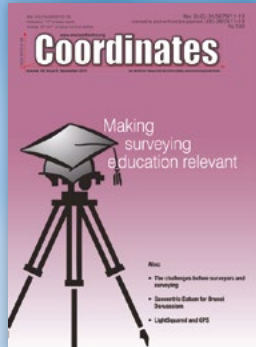
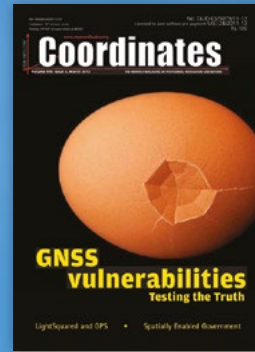
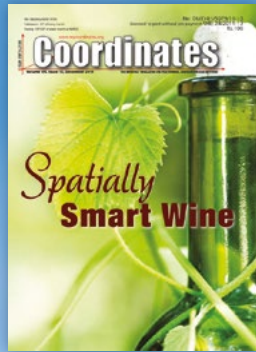
- The FIG Foundation will build a sustainable future by:
- grants and scholarships to projects, for instance to develop curricula for surveying education, training and capacity building, especially in developing countries;
 - encouraging research into all disciplines of surveying and to disseminate the results of that research;
 - promoting high standards of education and training for surveyors and to facilitate continuing professional development;
 - educating people in the disciplines of surveying, particularly in developing countries and countries in transition;

- promoting the use of distance learning, networking, eLearning and knowledge management in surveying education and continuing professional development;
- promoting the exchange of surveying personnel for greater understanding of all facets of the profession of surveying;
- supporting by seed funding conferences, meetings of young surveyors and similar events in co-operation with international agencies such as the United Nations.

Donations to the FIG Foundation

By attending the Congress you support the FIG Foundation with 10 EUR. Your participation in the Cultural Evening/Foundation dinner also supports the Foundation with 10 EUR. If you would like to give an extra donation contact the FIG Office in room ELMADAG 2.2.

More information at www.fig.net/foundation.



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CTORATE OF LAND REGISTRY AND CADASTRE



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7



8

Described by the historian Procopius as "the city surrounded by a wreath of water", Istanbul boasts an exquisite geographical position and deep roots in history. With a history going back 8,500 years, Istanbul is an ancient city that is simultaneously modern and fresh. Old-world and modern-world, Islamic and Mediterranean coexist in its captivating atmosphere. The distinctive characteristic skyline of the city, combining monumental minarets with modern skyscrapers, is perhaps the best proof. The outstanding universal value of Istanbul resides in its unique unification of diverse architectural styles of many eras and civilizations. Roman aqueducts, Byzantine churches, Venetian towers, Ottoman palaces, modern buildings and contemporary plazas give the city its matchless beauty.

1 Topkapi Palace

The opulent Topkapi Palace served as the court of the Ottoman Empire between the 15th and 19th centuries. Sultans, ambitious courtiers lived here and visiting the palace quarters, its jewel-filled Treasury and embellished Harem gives a fascinating glimpse into the daily life in the Palace.

2 Hagia Sophia Museum

The original church was built in the 4th century and was consumed by fire in the 5th century. The church was converted into a mosque after the Ottoman Conquest of Constantinople in 1453 and opened as a museum in 1935.

3 Blue (Sultan Ahmed) Mosque

Commissioned by Sultan Ahmet I in 1616, the Blue Mosque in Sultanahmet features an elegant exterior with several domes, half domes, and slender minarets. The interior is decorated with the finest pieces of blue tiles from İznik, which is why the Sultan Ahmet Mosque is most commonly known as the Blue Mosque.

4 Basilica Cistern

This subterranean cistern in Sultaneahmet area was commissioned by Emperor Justinian in 532. It is the largest surviving Byzantine cistern in Istanbul and includes 336 columns. Taken from ruined temples for the construction of the cistern, each column here has a different design and decoration.

5 Grand Bazaar

The foundation of Grand Bazaar was laid in 1461. It is one of the unique centers in Istanbul to be visited with 60 narrow streets in 37,700 square meters giant like labyrinth, and more than 3,600 shops. During this process of persuasion, you may hear words from maybe 10 different languages. Bargaining also is the most important ritual of pleasure for both sellers and buyers.

6 Galata Tower

Galata Tower was exactly built, it is commonly agreed that the tower took life during the reign of Byzantine Emperor Justinian around 507 CE. Nowadays, the 219ft (66.90 meters) high tower



Map of the Historical center of Istanbul. The Historical Area of Istanbul, situated on a peninsula surrounded by the Sea of Marmara, Bosphorus, and Golden Horn, were placed on the UNESCO World Heritage List in 1985.

serves as a touristic attraction only, with visitors standing in line to head to the top for a spectacular 360-degree view of Istanbul from the balcony.

7 Istanbul Modern

Istanbul Modern embraces a global vision to collect, preserve, exhibit and document works of modern and contemporary art and make them accessible to art lovers. Istanbul Modern hosts a broad array of interdisciplinary activities.

8 Archeology Museum

Istanbul Archaeology Museums consist of three museums. Those are Archaeology Museum, Old Eastern Works Museum and Enamelled Kiosk Museum. In the museum collections, there are rich and very important works of art belonging to various civilizations.

Kayıt ve Konferans Hizmetleri

FIG Kayıt Masası aşağıdaki gün ve saatlerde açık olacaktır:

- 4 Mayıs Cuma 07:30–17:30 Hilton Bosphorus – Lobi
- 5 Mayıs Cumartesi 07:30–17:30 Hilton Bosphorus–Lobi
- 6 Mayıs Pazar 07:00–20:30 İstanbul Kongre Merkezi
- 7 Mayıs Pazartesi 07:00–19:30 İstanbul Kongre Merkezi
- 8 Mayıs Salı 07:30–18:00 İstanbul Kongre Merkezi
- 9 Mayıs Çarşamba 07:30–18:00 İstanbul Kongre Merkezi
- 10 Mayıs Perşembe 07:30–18:00 İstanbul Kongre Merkezi
- 11 Mayıs Cuma 09:00–16:00 İstanbul Kongre Merkezi

Yaka Kartları

Her katılımcı bir yaka kartı alacaktır. Bu yaka kartı sizin resmi giriş kartınız olacaktır ve kongre süresince takılması zorunludur.

Delegate/Young Surveyor Yaka Kartı: Tüm teknik oturumlara, sergi alanına, öğle yemeklerine ve 4 konferans günü süresince olan tüm kahve molalarına, Genel Kurul katılımcılarının ise Genel Kurul günleri verilen yemek ve molalara, Hoşgeldiniz Resepsiyonuna, Açılış Törenine ve Veda Resepsiyonuna katılım hakkı verir.

Exhibitor: Sergi alanına, sergi günlerindeki öğle yemeği ve kahve molalarına, Hoşgeldiniz Resepsiyonuna, Açılış Törenine ve Veda Resepsiyonuna katılım hakkı verir.

Accompanying Person: Hoşgeldiniz Resepsiyonu, Açılış Töreni ve heyecan verici tam gün şehir turuna katılım hakkı verir. Detaylı bilgi için sayfa 30'a bakınız.

Kahve Molası ve Öğle Yemekleri

Kahve molası ve öğle yemekleri BEYAZIT SALONU ve sergi alanında servis edilecektir. 6 ve 11 Mayıs tarihlerindeki öğle yemeği ve kahve molaları Genel Kurul katılımcıları içindir.

Çanta ve Sertifikalar

Tam delege kaydı yaptıran herkes kongre çantası alabilecektir. Katılım ve sunum sertifikaları her gün, 16:30'dan sonra ve Cuma günü 09:00–16:00 saatleri arasında kayıt masasından alınabilecektir.

Sunum sertifikaları sadece sunum yapılan gün saat 16:30'dan sonra veya sonraki günlerde yine kayıt masasından alınabilecektir.

Konuşmacı Hazırlık Odası

Konuşmacı Hazırlık Odası YILDIZ 2 salonundadır. Sunum gününüzden önceki gün saat 16:00'a kadar PowerPoint sunumlarınızı salondaki yetkili kişiye teslim edilmesi gerekmektedir. Oturum saatinizde sunumunuz ilgili oturum salonundaki bilgisayarda olacaktır. Lütfen sunumlarınızı oturum salonlarındaki bilgisayarlara direk yükleyemeyeceğinizi unutmayınız.

Son dakika düzenlemeleri için Hazırlık Odası'nda kullanabileceğiniz bilgisayarlar olacaktır.

Oturumların saatlerine uygun şekilde sorunsuz olarak ilerlemesi ve diğer sunum sahiplerine haksızlık olmaması için lütfen size verilmiş zaman dilimine uygun olarak sunumunuzu tamamlayınız.

Sunum saatinizi www.fig.net/fig2018 adresi üzerinden kontrol edebilirsiniz.

Wireless Internet

İstanbul Kongre Merkezi'nde ücretsiz kablosuz internet sağlanacaktır.

- Wifi adı: FIG2018
- Şifre: ISTANBUL

Konferans Web Uygulaması

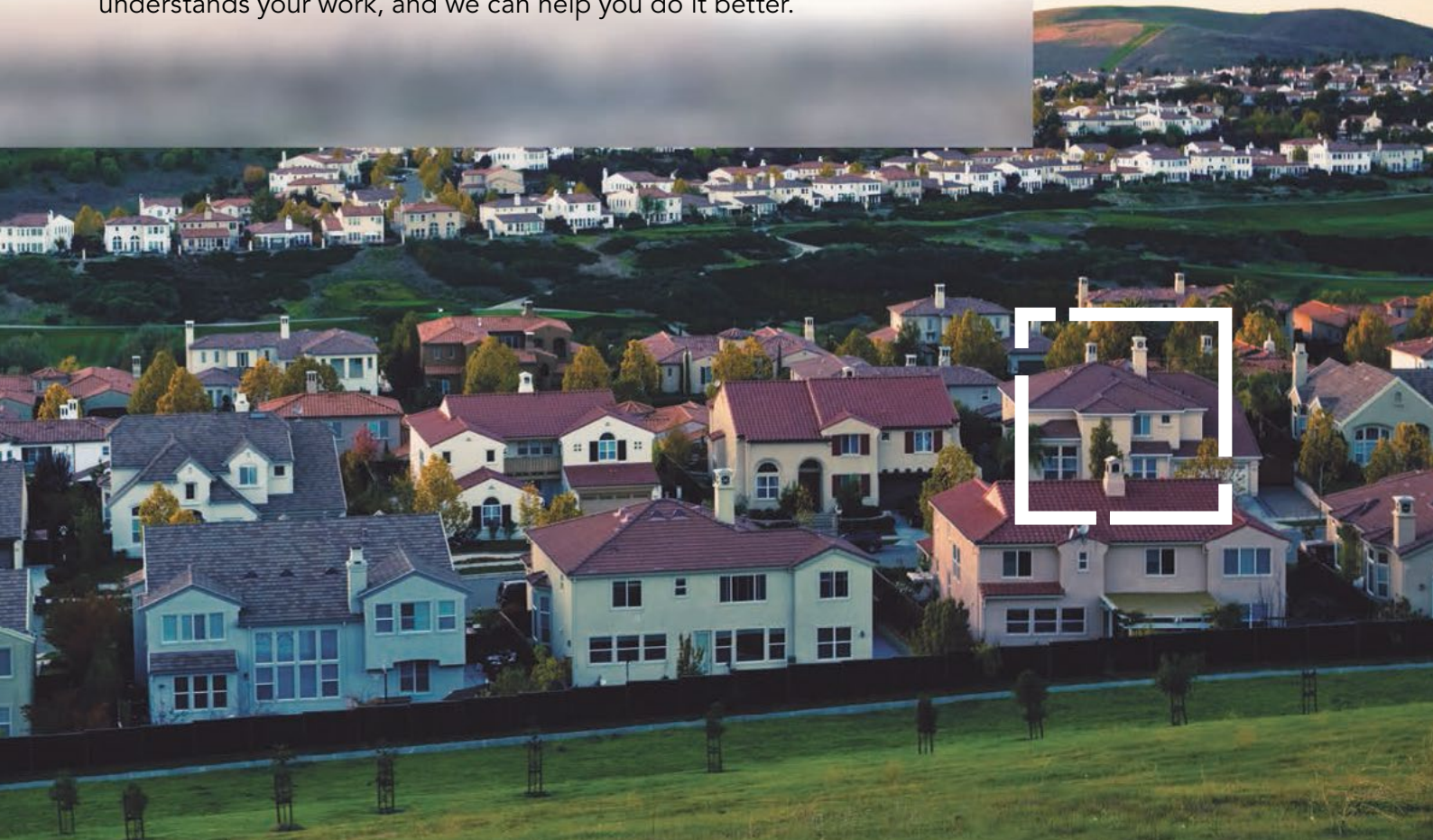
www.fig.net/app adresindeki ücretsiz FIG Konferansı Web Uygulaması program hakkındaki güncellemeler, konuşmacı ve katılımcı listesine ulaşmanızı sağlar. Aynı zamanda özet ve tam metinleri okuyabilir, kişisel kongre ajandanızı oluşturabilir, oturum ve sunumlara puan verebilir ve herkes tarafından görülebilir konferans fotoğrafları paylaşabilirsiniz.

Duyurular

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