



## 6th FIG Young Surveyors European Meeting

**“Mapping the path to sustainability”**

11-12 October - Porto, Portugal



### 6TH YOUNG SURVEYORS EUROPEAN MEETING REPORT



The success of previous FIG Young Surveyors events have paved the road to yet another collaboration of Young Surveying Students and Young Professionals.



The 6th Young Surveyors European Meeting was held in the beautiful city of Porto, Portugal on the 11th and 12th of October 2019. About 40 keen young professionals and students from 15 countries gathered together to share and explore new ideas, address pressing issues and focus on the future development for the European YS Network. Through organizing the meeting as a post-event of Geodecision 2019 we were lucky to have the opportunity to present together four interesting presentations from big names in geospatial world.



ORDEM  
DOS  
ENGENHEIROS

The future of Young Surveyors, as professionals as well as individuals, in mapping the path to sustainability was the focus of this meeting.



<http://www.fig.net/organisation/networks/ys/>



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The meeting started around 8h30 AM in EDP building, near by Casa da Música, a great touristic building in the city of Porto. After the participants arrived and registered, we began the meeting with the opening ceremony with welcome speeches from FIG President Rudolf Staiger, CLGE Vice-President Mairolt Kakko, President of Colégio de Engenharia Geográfica Ordem dos Engenheiros João Agria Torres and Young Surveyors Network Vice-Chair Kwabena Obeng Asiana. The first welcoming speech was from Rudolf Staiger where he welcomed all the participants and congratulated the organising team. A very important note from him is that we always should say F-I-G and not FIG (fig - fruit). Following, welcoming speech was from Mairolt Kakko where he did an overview about CLGE and their activities and also about the role of YS inside CLGE. Next welcome speech was from João Agria Torres where he talked about celebrations of the 5th centenary of the circumnavigation voyage and the associated scientific problem arising from the Treaty of Tordesillas: the rigorous determination of the longitude of the Moluccas, and also about Ordem dos Engenheiros and current activities. Last but not least, we had the presentation from Kwabena Obeng Asiana, where he talked about the vision and goals of YS, the activities that have been handle by YS, and also he did a presentation from John Hohol, FIG Foundation President who unfortunately could not be present in the meeting due to schedule conflicts. This presentation was about FIG Foundation role in the world and their purpose. He also congratulated the 4 Young Surveyors who received grants from the FIG Foundation to participate in this meeting.



After the welcoming speeches we started our morning together with Geodecision 2019 event. This morning was divided in two blocks each one with 2 presenters and with a coffee break between them.

## **Part 1 Geodecision at #6YSEM**

The two speakers were Rudolf Staiger (The FIG President) and Nigel Sellars (Standard Director, RICS)

Inês Vilas Boas (LOC Chairman) introduced the two speakers to the podium. The first speaker, Rudolf Staiger gave an explicit







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presentation on International Federation of Surveyors (FIG). He described FIG, the structure of the 10 commissions and their various



responsibilities. He also talked about the major activities of the body, which usually, the congress at every four (4) years and the FIG working every year. He gave a brief incite on expectations for the next FIG working week in Amsterdam. The establishment of FIG since 1878 in Paris by seven (7) nations and the language diplomacy was also explained. He spoke about FIG as a Volunteering body, and how the body is been financed. He explained how the FIG is organised and the vision for the next four (4) years (2019-2022) which he said is aimed at “Volunteering for the future as a target for the future”. Then he talked about the FIG Foundation and how it is been funded, its aim which is to collect money for charity goals, its members and the current situation. He concluded with a note, “Surveyors and Geospatialists are needed for the welfare of each society”. The next speaker, Nigel Sellars, gave a presentation on “Emotional Intelligence” (EI), emotional influence and how it affects decisions, behaviour and Performance. He mentioned, “Attitude is everything”. He further explained emotional strength and mood. How do you handle “Negativity” (failure and low results). He also talked about EI leadership competencies model and finally, how to take a positive step, which requires good insight, self-other awareness and authenticity. The session was concluded with appreciation and gift to the speakers, then the coffee break.

## Coffee Break



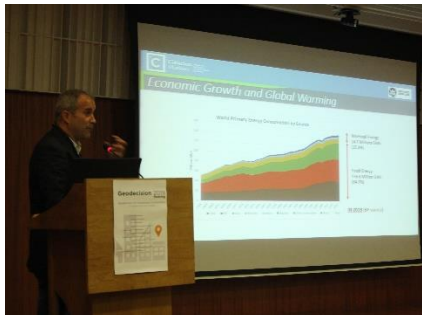
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Before sending everyone to the coffee break we announced some activities for the participants interact with each others and also to interact in social media. We announced 3 challenges with prizes for the winners: Best picture on social media, Best Tweet and Most Tweets. We also announced a raffle helded one the last day of the meeting by Here Technologies (Gold Sponsor of the meeting) where one participant could win na Action Cam, they just needed to register on Here Plataform.

During the coffee break we also gave an ice breaker activity for all the participants to get to know each other, we distributed papers with images of monuments of the city of Porto and others with descriptions, and the idea was to find the match of each paper.





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Right after the coffee break ends, we took a group photo (first page of the report).

## **Part 2 Geodecision at #6YSEM**

The two speakers in this second part were Ozan Köseoğlu, CEO of Digital Life Services, and Carlos Antunes, Professor of Geospatial Engineering at the Faculty of Sciences of the University of Lisbon.

Ozan Köseoğlu explained that DLS is working on digitalization of construction, environment connected to the lifecycle management, the strategy and deliverables. Köseoğlu pointed the importance of being agile. He mentioned that, in order to make an impact, there is a need to combine innovation and transformation. He continued his presentation about the BIM projects all around the world. He mentioned design and engineering are key parts during the implementation of BIM. Then he added that young generation and young mindset is needed on site. He finalized his words by mentioning smart city initiatives is the next step.

Carlos Antunes started his presentation by saying “Dark Side of the Moon” and he explained the indicators of a warming world. He showed figures that CO2 emissions from fossils, the global temperature

and the global sea level were raised in 30 years, since IPCC (Intergovernmental Panel on Climate Change) was established. Then he explained the future challenges mentioning greater exposure would bring greater damage. He finalized his presentation by saying “Present climate change mitigation (through technological innovation) needs economic growth and economic growth drives to more climate change.”

After the first session of the first day ends, the lunch took place at the restaurant “Sei lá”, a typical portuguese restaurante.

After lunch we re-started our meeting with 2 sessions, the first one about the topic “Developing Surveyors within Society” and the second session was a workshop given by Here Technologies.







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Netherlands, RAI Amsterdam Convention Centre, from 10 to 14 May 2020. With Smart Surveyors for Land and Water Management as theme, this conference will cover topics like Smart Surveyors, Integrated Land and Water management and Ten years to go to achieve the Sustainable Development Goals.

Ferah Pirlanta Koksall presented us an overview of CLGE as FIG Young Surveyors European Representative. Ferah has been involved in both national and international organisations related to Geomatics. She was the head of the organisation committee of the International Geodetic Student Meeting 2014 Istanbul. Then she was involved in the FIG Young Surveyors Network and was a member of the organizing committee of several meetings. Ferah is now representing FIG YS European Network at the CLGE Executive Board, which has as mission represent and promote the interests of the geodetic surveying profession in the private and public sector in Europe.



Gozde Kavas, one of the FIG Foundation Grant Winners, talked about the Construction of 1915 Çanakkale Bridge, regarding her final project of bachelors. The consortium of Daelim and SK E&C, which are Korean companies, along with Turkish companies Limak Holding and Yapı Merkezi, has been awarded the construction contract of 1915 Çanakkale Bridge and Motorway project for BOT basis. The bridge will be the longest suspension bridge in the world by its length of main span with 2,023 meters surpassing and planning to be opened in 2023. 1915 Çanakkale Bridge, will have features that meet the highest standards of engineering and aesthetic design. When completed, it will be the world’s longest suspension bridge by its length of main span 2,023 meters and will be the world’s widest open suspension bridge with 333 meters – high tower. With the

### **Developing Surveyors within Society**

Martine Eelderinke and Simone Emens presented an interactive activity regarding FIG Working Week 2020, through Kahoot platform, making inquiries to audience and explain each one next. This activity included questions about FIG Working Week, which will take place in The



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1915 Çanakkale Bridge, Asia and Europe will be combined for the fourth time over the sea and the seventh time in total.

In the Dardanelles Strait, which is crossed by ferry in about 30 minutes, the travel time, which takes about 1 hour with waiting times, will be reduced to 4 minutes when the bridge is opened. Through this project, the integration of ports in Marmara and Aegean regions with all transportation systems will be ensured.

David Elegbede represented Ilesanmi Adewale (one of the FIG Foundation Grant Winners who not could be there because of major reasons) presenting Practical ways of promoting women’s participation in the Field of Surveying. Technological advancement has made surveying processes to become more simplified, thus, changing the landscape of the industry. Despite this development, researches have revealed that women around the world have less presence in spatial sciences which has resulted in a low level of participation in policy implementation and decision-making as na essential part of sustainable development strategies within the global surveying community. Based on social survey conducted within a group of women and interviews with some women in the arms of affair in Lagos, Nigeria, it was discovered that less than 60% of women are fully involved in the activities of the profession as a result of some factos that hamper women’s participation varying from environmental, cultural and societal perception. This study, therefore, suggests some practical ways of promoting women’s participation in the field of surveying such as providing more support to women in the profession as a means of encouraging them to navigate to the peak of their careers.



Before started the second and last session of the afternoon we had a coffee break.

## **HERE XYZ and Developer Portal Workshop**

The workshop session given by Richard Sueselbeck: Principal Developer Evangelist at HERE Technologies, started with na explanation about the company, which started in 1985 and also





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about HERE platform, it was explained the component of the development of the software because. It was also mentioned the navigation system used in building their software and how car navigation system was also introduced in the development of the software. The high definition data collection and the amount of data collected hourly and daily was also mentioned, he gave a robust explanation about the developers portal for upcoming developers who can use it to produce their maps. One of the crucial point mentioned was the XYZ tools on their workstation used to build maps; he gave overview of different API for developers including the Location API. The XYX HUB where Geospatial data were stored was mentioned and explained; He talked about how the software can produce addresses and the Geocoder which is used to convert latitude/longitude into street addresses and Reverse Geocoder which converts street addresses to latitude/Longitude which can be used by Post Offices. He lastly mentioned the Map API available for Web and Mobile



### **Cultural Activity**



To finish the first day we had a visit to Calém Port Wine Cellars in Porto downtown where we were learn a little bit about th eport wine history in Portugal and taste diferente port wines while listening to traditional music, Fado.

After the cultural activity we had our dinner at the restaurante “Ar de Rio”.





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## 2nd Day

On the second day, we started with a brief presentation about the afternoon activity, charity walking tour, by introducing one of the beneficiaries, Forestis (national forestry association). To present the association, Vera Santos did a presentation to introduce the association and their purpose.

## Evolutions in Geospatial Technology

The first session of the morning has the name Evolutions in Geospatial Technology and counted with really good presentations about what YS have been doing in the geospatial world to innovate.



Matteo Tartaglino from Studio Tecnico MT was the first presenting about Speleology and Laser Scanning. He began the presentation by first describing speleology and the use of laser scanners in the study of caves. He talked about the UNDP project he was working on to study and conserve natural heritage in North Macedonia using satellite imagery, Cave equipment, GPS, Lidar techniques and cameras. He enlightened the audience on the origin of the name Belul Cave and demonstrated how caves are surveyed, analyzed and reported through a video clip. He highlighted that the combination of all the technologies is a new way of studying caves and can aid in new cave visualization for tourists.



Anca Pavaloiu, FIG Foundation Grant Winner, did a presentation in about Digital Orthophoto/Aerial Images from U.A.V. Anca highlighted the use of UAVs in the Company TOPOEXIM for topographical and cadastral surveys on projects like PNCCF and land property details registration for CADGEN. She exhibited the whole process from image data capture using Motorcopters, data processing using agisoft photoscan to the final results like Digital Terrain Models. She also enlightened the audience on the Romanian Surveyors Union with emphasis on the Young Surveyors Commission, outlining the activities carried out by the commission and shading light on the 2nd Edition of the Romanian Surveyors working Week scheduled from 12th October 2020.



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Merve Keskin, FIG Foundation Grant Winner, did a presentation about the topic Eye-tracking technology in Cartography. Merve gave a brief explanation of what eye tracking was and its history, highlighting its use for research and marketing displays. An attention test was carried out to demonstrate illuminators, preprocessing and determination of what one is looking at. She outlined her current research on eye tracking in cartography with emphasis on procedures followed and both qualitative and quantitative analyses. She showed an experiment carried out on a map observing that linear features, heat maps and settlements being first focused on. She explained technical noise, infrared and sunlight being some of the issues faced during eye tracking experiments. The session was concluded with an Interactive Activity of using EyeTribe for Eye tracking.



After this session we had a coffee break to relax before the second session of the morning with the name Surveying our Changing Environment.

### Surveying our Changing Environment



The session started with all the participants expected from the day, after the first coffee break. The Chair of the session, Cromwell gave a quick reminder about the event’s challenges and awards before introducing the first Speaker. Lia Duarte from the University of Porto talked about four case studies in which, a newly developed QGIS plugin was used to assess, identify, quantify and evaluate risks related to environmental changes. She gave concrete results on the usability of said plugin although, it is more stable if run through earlier QGIS versions (e.g. QGIS 3.4).



Next presentation was given by Dora Roque from LNEC (National Laboratory of Civil Engineering) highlighted her work using SAR data to fully understand, assess, and evaluate the effects of extreme meteorological events in the environment. She illustrated her studies that cover different times of a certain area thus giving the participants a glimpse of how useful SAR data is in monitoring in this context.





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Next, Inês Vilas Boas gave an update on the ArcGIS Online project, a collaboration project between the FIG YSN and ESRI. The presentation gave the possibility to understand the project, how it came about, the process that was followed to reach a collaborative project, its presentation in ESRI User Conference in San Diego, California, the protocols and limitations that must be followed, the actual number of young surveyors who registered and got accepted in the project, and the future expectation from the said project.



Lastly, Ferah Pirlanta Koksall introduced and talked about the Mapillary mobile app, which would be used in the latter part of the day during the Charity Walking Tour around Porto. She illustrated the basic functionalities of the app, the Company's profile, and gave the participants information on how these crowdsourced data are used and implemented within the Mapillary interface.



At the end of the session, before going to lunch, everyone was reminded and invited to participate in the Charity Walking Tour, and to further help by purchasing the charity shirt. This year's Charity Walking Tour favored Forestis and the FIG Foundation.

## **Mapping for Sustainable Communities**



On the last, but not least, session of the meeting, we had presentations regarding the topic Mapping for Sustainable Communities.

Cidália Fonte, teacher of the University of Coimbra, did the first presentation. She has been working actively on Volunteered Geographic Information (VGI) and on this session she presented some projects that promote this sharing. Land Use and Land Cover (LULC) mapping is a topic that can easily rely on this information, just by sharing geotagged pictures (latitude/longitude information on them). However, some disadvantages come up regarding bad positioning (usually taken by smartphones) and spatial distribution, touristic or easily accessible places tend to get more information than remote ones. This classification can be done in platforms like Geowiki or Fotoquest. Other websites promote campaigns where





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people go to the field specially to get information for mapping, like building's description, POI's. OpenStreetMaps, an open and volunteered based mapping platform gives a huge help on creating these maps, since they are updated frequently, promoting a fast and regular LCLU mapping.



The second presentation was given by Anna Shnaidman, postdoctoral researcher on Delft University, started her presentation by appealing that land is finite, so it has to be well managed. Sadly, only 30 % of the world has cadaster and it's an issue that should be taken in concern by all national authorities. Underdeveloped countries are the ones that seem to lack more cadaster but it's not easy to start it, or even finish it. There's not a specific recipe that fits any country, they are all different. Although, Anna is involved on creating some standards that every country should follow, or at least, be guided by them: the ISO 19152. Some countries like Columbia, with Swiss help, and Nepal are moving forward on adopting this ISO and solving such a vital issue for their nations.



The last presentation was given by Divyani Kohli, an assistant professor at University of Twente. She develops a lot of her research on GIS and Remote Sensing and presented some of the topics she has been working on, like mapping night and day time population density, or such an important matter like sexual harassment, where routes from home to school/work are being mapped in Dhaka, Bangladesh, recording where and how much women feel safe, or not, while walking on their daily activities. She also presented some tools she developed about slum automatic identification using remote sensing. This type of housing grows very fast and therefore needs to be mapped easily and fast.



For the close the meeting we had a closing ceremony where we thank to speakers, members of the organizing team, 21 fantastic Young Surveyors from all around the world, to sponsors and supporters, Here Technologies, Trimble, Ripro, Geolayer, FIG, FIG Foundation, CLGE, Ordem dos Engenheiros, EDP and Mapillary.





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## CHARITY WALKING TOUR



We announced the winners of the mini challenges. We chose the best 3 photos and best 3 tweets and ask to all the participants to vote on the preferred one. The prizes of the mini-challenges were mini bottles of port wine. Anca Pavaolu won the best picture on social media and Faney Oluwatobi won the most tweets and the best tweet.

We also handed over the certificates to FIG Grant Winners.

## Charity Walking Tour



To end our meeting in the best way possible, we had our charity walking tour through the city of Porto right after the afternoon coffee break. The main purpose of this activity was to raise funds to help FIG Foundation and Forestis by selling t-shirts with a creative logo created by the organizing team, and also to introduce participants to the history of the city. The activity was organized with mapillary, the participants took photos along the walk with mapillary app.

An enormous thank you to our sponsors and supporters, without them none of this would be possible.



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A big thank you, also, to the full support of the Fédération Internationale des Géomètres and the FIG Foundation, for giving the opportunity to four Young Surveyors from around the world to participate in this meeting. They were the winners of FIG Foundation Grants for 6YSEM.



**Adewale Ilesanmi,  
Nigeria**

**Anca Păvăloiu,  
Romania**

**Gozde Kavas,  
Turkey**

**Merve Keskin,  
Turkey**

## **FIG FOUNDATION GRANT WINNERS for 6<sup>th</sup> YSEM**

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:: Cromwell Manaloto, Italy  
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