

# FIG Young Surveyors Network

April 2012 Newsletter

## Young Surveyor Events – What not to miss!

More details at: [www.fig.net/fig2012](http://www.fig.net/fig2012)

1. **May 4<sup>th</sup>-5<sup>th</sup>:** First FIG Young Surveyors Conference: Knowing to create the future
2. **Sunday May 6<sup>th</sup> 16:00 -18:00**  
FIG Commission Meetings
3. **Sunday May 6<sup>th</sup> 20:00 – 22:00**  
Commission Dinners
4. **May 7<sup>th</sup> – 9<sup>th</sup>:**  
Speed networking – every afternoon in the trade fair, outside Trimble
5. **Monday May 7<sup>th</sup> 16:00 – 17:00**  
Young Surveyors Network Meeting

### Other unique events:

6. **Wednesday 9<sup>th</sup> May 14:00 – 15:30**  
Professional Woman – Development of Advanced Economy session

And don't forget the social and technical tours!

[www.fig.net/ys](http://www.fig.net/ys)

### Find us on:

- **LinkedIn**
- **Facebook**
- **Twitter**

## Editors' Report

Dear Colleagues and Friends,

**The year 2012 is a big year for the FIG Young Surveyors Network, with our First FIG Young Surveyors Conference coming up in May.**

**With the 2010 FIG Congress two years ago in Sydney, and the 2011 FIG Working Week in Marrakech, we have a new committee that has grown over the year and is working hard to meet the needs of young surveyors around the globe.**

**Please read on to find out what's happening around the globe, and some insights into the 2012 Working Week. Hope to see you in Rome or online...**

Happy surveying!

**Eva-Maria Unger & Daniel Helmricks**  
Editors

## Upcoming Events

A selection of events, but by no means all! Please visit:

<http://www.fig.net/events/events.htm> for more!

**19-24 July, San Diego, California:** ESRI User Conference, Survey Summit and ACSM Annual Conference. <http://www.surveysummit.com/index.html>

**24 August - 3 September, Melbourne, Australia:** XXII ISPRS 2012 Congress. <http://www.isprs2012-melbourne.com/>

**26-29 November, Montevideo, Uruguay:** 8th FIG Regional Conference. [www.fig.net/uruguay](http://www.fig.net/uruguay)

**6-10th May Abuja, Nigeria:** Environment for Sustainability. FIG Working Week and General Assembly. <http://www.fig.net/fig2013>

## In this Newsletter:

Chair's Report	p. 2
Young Surveyors on Facebook	p. 2
Overview of the FIG Commissions	p. 3
Short articles from active Young Surveyors	p. 5

**Next Edition?** We hope to issue our next edition in mid-late 2012. Email us your article ideas and submissions or reports about our first Young Surveyors Conference!

### Committee

Kate Fairlie (Australia)  
Chris McAlister (Australia)  
Cemal Özgür Kivilcim (Turkey)  
Jens-Andre Paffenholz (Germany)  
Eva-Maria Unger (Austria)  
Daniel Helmricks (U.S.A.)

### Regional Representatives

Africa – Benedicta Ugwulebo  
Asia – Kenny Chan  
Europe – TBA  
North America – Daniel Helmricks  
Oceania – TBA  
South America – TBA

Want to know more or think you're up for the job? Get in touch and email us at [fig.youngsurveyors@gmail.com](mailto:fig.youngsurveyors@gmail.com)



# Chair's Report

# Young Surveyors on Facebook

*Ciao a tutti!*



I am writing this in the hectic lead-up to the Rome 2012 FIG Working Week and our *first ever* FIG Young Surveyors Conference! I am again witnessing first-hand how much time and effort the FIG Office and FIG Council puts into organizing these events – so a big thank you to Markku, Louise, Hanne and all others in the FIG community who contribute so much to these events!

I trust we have put together an exciting and inspiring conference program, thanks to the many sponsors including Trimble, ESRI, Consiglio Nazionale Geometri e Geometri Laureati (CNGeGL) and Cassa Italiani Previdenza e Assistenza Geometri. I would also like to particularly thank and promote the FIG Foundation, which, amongst its other work, continues to support young surveyors from around the world to attend FIG events. The FIG Foundation sponsored 4 FIG Young Surveyor Fellowships for young surveyors from developing countries to attend the FIG Working Week and Conference – and I am certainly looking forward to the inspiring presentations from these Fellows!

For young surveyors attending the conference, there will be an opportunity to work closely with the FIG Commissions and have some input into their ongoing 2011 – 2014 working plans. Many young surveyors will be presenting at both the conference and Working Week so please take a look at the respective programs available at [www.fig.net/fig2012](http://www.fig.net/fig2012).

And, very exciting for me personally, we will be exploring 'youth as agents of change' during the second day of the conference, with presentations by Dr Diane Dumashie, Prof. Stig Enemark, Danilo Antoniou from the UN-HABITAT Global Land Tools Network and, of course, we will hear from our FIG Fellowship Awardees.

But it's not all work – there will be lots of opportunity to play in this most fabulous of cities! A special item on the young surveyor agenda is a trip underground with the young archaeologists of the Association Roma Sotterranea! You'll have to demonstrate your networking skills on day 1 of the conference, with only 10 young surveyors able to attend! And of course, there will be speed networking during the days, nightly social activities (make sure to check in with the conference notice board, information will also be left at the Trimble Market Stall) and the usual selection of FIG evening events and social tours.

For those sadly unable to attend, I encourage you to ask questions on the FIG Facebook and LinkedIn pages! We hope to upload some select podcasts from sessions, and I will endeavour to tweet as much as possible. Technical session papers will be available online at the FIG Surveyors Reference Library – [www.fig.net/srl](http://www.fig.net/srl) - an excellent reference source!

We now have over 500 members on our Facebook page and over 300 on our linkedin page .... So join the discussion!

**See you in Rome!**

*Kate Fairlie*



Eng Bonny Yegon surveying in Nairobi



Chuks Onwuzuligbo surveying for gully erosion in Nigeria



Guess where this survey mark is from?



Hyunkee Lee surveying in South Korea



Hyunkee Lee cave surveying in South Korea

# Commission profiles

Get the low down on which Commission's events you should attend at FIG...

FIG's technical work is led by **10 Commissions**. The responsibilities and work plans of Commissions are approved by the General Assembly during the FIG Congress. The work of each Commission is led by the Chairperson – elected for four-year term of office by the General Assembly at the Congress. A number of working groups exist within each Commission. More info at: <http://www.fig.net/comm/comindex.htm>

## Commission 1 – Professional Standards and Practice

Current Chair: Ms. Leonie Newnham (Australia)



Leonie Newnham

Commission 1 reviews the changing nature of surveying and the role of the professional. This Commission aims to build supporting materials for surveying professionals – young surveyors in particular! Join this commission to consider social media opportunities, identify standards for international boundary demarcation or to review the role of surveyors in the future!

## Commission 2 – Professional Education

Current Chair: Prof. Steven Frank (United States)



Steven Frank

Commission 2 contributes to the fields of curriculum development, learning and teaching methods and technologies, educational management and marketing, continuing professional development and networking in education and training. Join this Commission if you'd like to change the way we educate our professionals throughout their careers.

## Commission 3 – Spatial Information Management

Current Chair: Prof. Yerach Doytsher



Yerach Doytsher

Commission 3 concerns the management of spatial information pertaining to land, property, hydrography and beyond. This includes not only management, but the related processes, procedures and enabling resources and the resulting impacts on organizational structures, business models and the way we surveyors do business. Join Commission 3 if you're a metadata guru, keen business analyst or simply believe the future is in spatial services.

## Commission 4 – Hydrography

Current Chair: Dr. Michael Sutherland (Trinidad & Tobago/Canada)



Michael Sutherland

Commission 4 covers the disciplines of hydrographic surveying, offshore surveying and hydrographic education. Relevant topics include: the marine environment, coastal zone management, data processing of hydrographic data, nautical charting and creation of bathymetric maps. Join this Commission if you enjoy the adventure of the high seas! (*editor's note: we also hear this Commission knows how to party...*)

## Commission 5 – Positioning and Measurement

Current Chair: Mr. Mikael Lilje (Sweden)



Mikael Lilje

Commission 5 is for the quintessential surveyor, covering the development, use and integration of technologies for positioning and measurement and the associated standardization, best practice and fundamental reference frame issues. They say they're the most active Commission – see our article here [http://www.fig.net/ys/Newsletters/ys\\_newsletter\\_aug\\_2011.pdf](http://www.fig.net/ys/Newsletters/ys_newsletter_aug_2011.pdf)

## Commission 6 – Engineering Surveys

Current Chair: Prof. Gethin Wyn Roberts (China)



Gethin W. Roberts

Commission 6 topics deal with the acquisition, processing and management of topometric data, survey methods, metrology, quality control, survey validation and deformation monitoring. If the future is technology, then it's all here in this Commission, be it positioning systems, machine guidance or Synthetic Aperture Radar!

## Commission 7 – Cadastre and Land Management

Current Chair: Mr. Daniel Roberge (Canada)



Daniel Roberge

Commission 7 focuses on land administration (which includes the determination, recording and dissemination of information, value and use of land and land management policies) and land management (implementation of land policy and land policy instruments). Join this commission to review pro-poor land tools, cadastres of the future or climate change and natural disaster impacts on the way land is managed.

## Commission 8 – Spatial Planning and Development

Current Chair: Mr. Wafula Nabutola (Kenya)



Wafula Nabutola

Commission 8 has close ties with Commissions 3 and 7, drawing these together to focus on spatial planning across scales (regional and local) and types (urban and rural) of land use. Themes include: the role of surveying in sustainable development, informal settlement issues, good governance and disaster risk management. This Commission is changing the world one step at a time!

## Commission 9 – Valuation and the Management

Current Chair: Prof. Frances Plimmer (United Kingdom)



Frances Plimmer

Commission 9 includes the disciplines of valuation, project management, land use feasibility planning, real estate economics, market analysis, asset management and the management of building use to ensure optimum benefits to occupiers. Join if your interest is in property tax, appraisal systems, management of public property assets or land acquisition processes.

## Commission 10 – Construction Economics and Management

Current Chair: Mr. Robert Šinkner (Czech Republic)



Robert Šinkner

Commission 10 targets construction economics, commercial management, construction law, negotiation and project and program management including planning and scheduling. The dark horse, Commission 10 could be your chance to shine if you're a quantity surveyor, building surveyor, project manager or life cycle assessor!

# Young surveyors around the world

## Young Surveyor Launches into Jet Propulsion Lab

*Young Surveyor Nic Donnelly of New Zealand took up a three-month internship with NASA's Jet Propulsion Laboratory (JPL) in early 2012.*

**So, Nic... how did you organize this amazing internship?**

I was one of the 'Young Ambassadors' at the Sydney2010 FIG Congress. Whilst there, I met Ruth Neilan who is the Director of the IGS Central Bureau. We both realized pretty quickly that the IGS and Land Information New Zealand were facing some similar problems around geodetic metadata standardization. So an internship was proposed! And although we had to delay it due to the New Zealand earthquakes (which caused massive infrastructure damage, including to the geodetic system) – I made it to JPL in early 2012.

**What did you do at JPL?**

My main focus was the standardization of geodetic metadata. I had done some similar work with New Zealand and Australian colleagues, and much of this experience could be applied to the data and metadata that IGS routinely deals with. I've also had the chance to meet with other government, academic and scientific organizations here in the States – and there is general agreement that there is a gap in the standards for geodetic metadata. By the time the FIG Working Week in Rome comes around, I hope to have set up a working group, mailing list and website where interested parties can share knowledge and expertise.

**So what was the highlight of your time at JPL?**

You mean just one?! I can list some, which include:

- Meeting many colleagues face-to-face, with whom I'd only ever emailed
- Getting an insider's perspective of the operations of an international geodesy organization
- Attending the UNAVCO Science Workshop and learning about the innovative ways groups use geodetic observations
- Visiting the Space Flight Control Center at JPL, where missions such as Voyager and Mars Rover are controlled!!!

**Sounds great! If you want to get in touch with Nic with any of your 'geodetic metadata' questions, please feel free to email him at [ndonnelly@linz.govt.nz](mailto:ndonnelly@linz.govt.nz)**

Nic wishes to acknowledge the support of LINZ and JPL in making this opportunity a reality.



### **Who are the IGS?**

The IGS itself is a voluntary federation of over 200 agencies from around the world, that pool data and resources to produce products that support the highest precision GNSS applications. For example, Land Information New Zealand (LINZ) contributes data from several GNSS stations to the IGS, and utilizes the IGS products to calculate accurate geodetic coordinates over long distances.

### **What is JPL?**

The *Jet Propulsion Laboratory* is the lead United States centre for robotic exploration of the solar system and is a facility of NASA. JPL hosts the International GNSS Service Central Bureau. This Bureau is responsible for coordinating IGS activities and making IGS data, products and services available to the science and surveying communities.

Pictures: Nic at the NASA Goddard Space Flight Center, where they have a site where the four space geodesy techniques are collocated (GNSS, VLBI, SLR, DORIS). (left) VLBI (below) SLR



# Back to the Future in Ancient Efes

First of all, hello to everybody!

Maybe some of you know me as the Secretary of the Young Surveyors Network or you know me in person and met me at one of the FIG events. But back before all this, when I was still a young surveying student, I was facing the summer holidays with no money to travel, and no summer job lined up! And so I took up the opportunity to work with the Austrian Archaeological Institute, as a surveying intern in Ephesos, Turkey. How was I lucky enough to get this, you may ask? Well it was through a contact with my local surveying association – which just shows how important networking is!

Four years later I was still working in Ephesos every summer... So first I will tell you some facts about the Austrian Archeological Institute: It was established in 1898 as an immediate response to the extremely successful excavations carried out at Ephesos since 1895. Nowadays it serves as a research institute with its Central Branch in Vienna and some other branch offices in Athens and Cairo. Altogether they are leading numerous archaeological projects at home and abroad. The most well-known archeological research site of the OeAi is Ephesos - which is where I was. Ephesos itself is one of the oldest Greek city and later became a major Roman city. It was located in former days directly at the sea and is nowadays 6 km away from the sea due to sedimentation.

Before I got this opportunity/job I never realised how closely surveyors and archaeologists worked together on such digs. But archaeologists really need surveying services and really dependant on our data (hopefully no archeologist is reading this!!!).

One of the jobs I completed in Ephesos was an aqueduct project called “Değirmendere Aqueduct” which involved studying the water pipeline leading from the source in the Değirmendere valley to Ephesos - over 40 km! It is the longest water pipeline leading in to Ephesos and included 23 bridges and 4 tunnels. I can remember the first time a “bridge” was shown to me in the middle of nowhere and I was told to survey it and make a map for it! It looked nothing like a bridge - all I had seen was a few stones lying on each other! Another challenge was communicating with my Turkish assistant – he had no English or German, and I had no Turkish! But somehow we both made it and now looking back it was great fun.

With time I began to learn more about the archeological side of the work, and soon it wasn't even necessary to explain the buildings to me before I began taking measurements! That steep learning curve was also one of the main things I really loved about this work! At first I had no idea, but soon I was able to not only preempt requests, but provide suggestions on how best to do the work, or new technology developments that would help. The next years a team of Sotterranei di Roma, some Italian archeology researches, joined us and we could start surveying the tunnels of this water pipeline. Working with them was awesome and I learned a lot.

So some of the main surveying works I was doing in and around Ephesos included:

- Preserving the surveying reference network and adding new points as necessary
- Leveling with high precision
- Photogrammetric recording of buildings
- Surveying very small and long tunnels (height: 1.8 m and width: 1 m)
- Setting out the area to be examined
- GPS recording of the whole pipeline and archaeological findings

and finally save myself from the snakes ...!!!

All in all it was an awesome time with a great and multicultural team. I was never expecting working in this area as a student and just got the chance because I was open minded and not scared of challenges. So take all the chances you get and keep on networking!!!

