

XXV FIG Congress 2014

16–21 June 2014

**Kuala Lumpur
Malaysia**

“Engaging the Challenges,
Enhancing the Relevance”



Technical Programme

Organised by:



INTERNATIONAL FEDERATION
OF SURVEYORS



PEJUTA – ASSOCIATION OF AUTHORISED
LAND SURVEYORS MALAYSIA

Platinum sponsors:





The XXV FIG Congress 2014

Technical Programme

Friday, 13 June

UN-Habitat/GLTN/FIG/ YSN Training of Trainers for Social Tenure Domain Model (STDM) Use and Application
 Friday, 13 June 13:30–17:00
 Venue: PNB Darby Park
 Commission: Young Surveyors Network
 Chair: Ms. **Eva-Maria Unger**, Chair elect of FIG Young Surveyors Network, Austria
 Rapporteur: Ms. **Nur Zurairah Abdul Halim**, FIG Young Surveyors Network, Malaysia

Sunday, 15 June

FIG ACCO Meeting
 Sunday, 15 June 09:00–17:00
 Venue: Room 306, KLCC
 Chair: Prof. **Rudolf Staiger**, FIG Vice President, Germany

- Chairs and Chairs Elects of FIG Commissions
- By invitation only

UN-Habitat/GLTN/FIG/ YSN Training of Trainers for Social Tenure Domain Model (STDM) Use and Application
 Sunday, 15 June 09:00–17:00
 Venue: PNB Darby Park
 Commission: Young Surveyors Network
 Chair: Ms. **Eva-Maria Unger**, Chair elect of FIG Young Surveyors Network, Austria
 Rapporteur: Ms. **Nur Zurairah Abdul Halim**, FIG Young Surveyors Network, Malaysia

Monday, 16 June

FIG General Assembly – Part 1
 Monday, 16 June 09:00–13:00 and 14:00–17:00
 Venue: Conference Hall 2, KLCC
 Chair: Mr. **CheeHai Teo**, FIG President, Malaysia

- For all FIG members
- Open for observers

UN-Habitat/GLTN/FIG/ YSN Training of Trainers for Social Tenure Domain Model (STDM) Use and Application
 Monday, 16 June 09:00–12:30 and 13:30–17:00
 Venue: PNB Darby Park
 Commission: Young Surveyors Network
 Chair: Ms. **Eva-Maria Unger**, Chair elect of FIG Young Surveyors Network, Austria
 Rapporteur: Ms. **Nur Zurairah Abdul Halim**, FIG Young Surveyors Network, Malaysia

Welcome Reception
 Monday, 16 June 17:30–19:30
 Venue: Ground Floor, Hall 1, KLCC

The Welcome Reception will be a memorable event with a panoramic garden view from the foyer of the Kuala Lumpur Convention Centre. A warm welcome will be provided with light entertainment, drinks and Malaysian delicacies – an ideal start to the Congress.

All delegates and registered accompanying persons are invited to attend this Welcome Reception. This is an excellent opportunity to renew old friendships and make new acquaintances as you are welcomed to Kuala Lumpur.

Saturday, 14 June 2014

FIG Council Meeting
 Saturday, 14 June 09:00–17:00
 Venue: Room 308, KLCC
 Chair: Mr. **CheeHai Teo**, FIG President, Malaysia

- By invitation only

UN-Habitat/GLTN/FIG/ YSN Training of Trainers for Social Tenure Domain Model (STDM) Use and Application
 Saturday, 14 June 09:00–17:00
 Venue: PNB Darby Park
 Commission: Young Surveyors Network
 Chair: Ms. **Eva-Maria Unger**, Chair elect of FIG Young Surveyors Network, Austria
 Rapporteur: Ms. **Nur Zurairah Abdul Halim**, FIG Young Surveyors Network, Malaysia

Registration Desk

The registration desk is located at the foyer, Level 3 at KL Convention Centre.

Opening hours:

Sunday 15 June	13:00–18:00
Monday 16 June	08:00–18:00
Tuesday 17 June	08:00–18:00
Wednesday 18 June	08:00–18:00
Thursday 19 June	08:00–18:00
Friday 20 June	08:00–16:00

Registration for the 2nd FIG Young Surveyors Conference takes place at Impiana Hotel.

Speakers' Preparation Room

The Speakers' Preparation Room is located in room 310, Level 3 at KL Convention Centre. All speakers are requested to visit the Speakers' Preparation Room to upload their presentation at least 24 hours prior to the start of their session.

Opening hours:

Monday 16 June	12:00–18:00
Tuesday 17 June	08:00–18:00
Wednesday 18 June	08:00–18:00
Thursday 19 June	08:00–18:00
Friday 20 June	08:00–16:00



FIG Commission Annual Meetings

Tuesday, 17 June 08:00–09:00
Venue: KLCC
Commission: 1, 2, 3, 4 and 5

- Meetings in following rooms:
- Commission 1: 303
 - Commission 2: 302
 - Commission 3: 304
 - Commission 4: 305
 - Commission 5: 306

2014 FIG Director Generals Forum – Session 1

Tuesday, 17 June 09:00–10:45
Venue: Rooms 403 and 404, KLCC
Chair: Mr. **CheeHai Teo**, FIG President, Malaysia

The Annual FIG Director Generals Forum brings together Chief Executives or Director Generals (or their representatives or nominees) of national (or provincial) agencies and FIG Affiliate Membership that has responsibility over mapping, cadastral, valuation, planning and development, land administration and management from around the world. 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. The Forum will also seek approaches to secure, support, sustain and safeguard land and property rights for all, draw upon appropriate experiences and good practices to further improved efficiency and better governance within the land sector. Enhancing effectiveness of land sector agencies is necessary at the onset of the Post-2015 Development Agenda.

- By invitation only

The 2014 FIG Director Generals Forum is supported by UN Habitat-GLTN

FIG Member Associations Forum

Tuesday, 17 June 09:00–10:45
Venue: Room 402, KLCC
Chair: Sr **Mohammad Azmi Mohd Zin**, President of PEJU-TA, Malaysia

The 2014 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 37th FIG General Assembly can interact and exchange experiences, initiatives and programs that aimed at uplifting professional stature and standing, and allowing the Profession to enhance its significance and relevance within its jurisdiction. The President of the host association, the Association of Authorised Land Surveyors Malaysia, will chair the Forum.

- By invitation only

FIG Platinum Corporate Member Special Session: Leica

Tuesday, 17 June 09:00–10:45
Venue: Room 401, KLCC
Chair: Mr. **Craig Hill**

NEW feature: FIG Platinum Corporate members have been given the opportunity to compose a session in the technical programme of the congress.

- *Hexagon Overview.* Mr. **Craig Hill**
- *Leica Geosystems Overview.* Mr. **Bob Morton**
- *HDS Overview.* Mr. **Kevin Cordeiro**
- *H20 / Monitoring Overview.* Mr. **Neil Ashcroft**
- *GSD Overview.* Mr. **Rolf Schaepfi**
- *Solution Overview.* Mr. **Chong Kwong Ki**

FIG Task Force on Surveyors and Climate

Tuesday, 17 June 09:00–10:45
Venue: Room 306, KLCC
Chair: Mr. **John Hannah**, Chair, FIG Task Force on Surveyors and Climate
Rapporteur: Mr. **David Mitchell**, FIG Commission 7 Delegate

Isaac Boateng (United Kingdom): Assessing Climate Change Induced Displacements and Its Potential Impacts on Climate Refugees: How Can Surveyors Help with Adaptation? (6779)
This is a peer reviewed paper.

Frank Friesecke (Germany): Transforming the Energy System in Germany – About the Role of the Surveyor in Dealing with Climate Change (6797)

Stig Enemark (Denmark): The Climate Change Challenge for Land professionals (7211)

Jon Mills, Adrian Fox, Pauline Miller, Lucy Clarke (United Kingdom) and **Matt King** (Australia): Determining the Spatio-Temporal Distribution of 20th Century Antarctic Peninsula Glacier Mass Change (7002)

Dr. **Matthias Kunz** (Germany), **Paul van der Molen** (Netherlands) and **David Mitchell** (Australia): Engaging the Challenge of Climate Change, Enhancing the Role of Land Surveyors in Land Use Change and Carbon Credit Markets (7117)

2nd FIG Young Surveyors Conference

Tuesday, 17 June 09:00–10:45
Venue: Impiana Hotel
Commission: Young Surveyors Network
Chair: Ms. **Kate Fairlie**, Chair of FIG Young Surveyors Network, Australia
Rapporteur: Ms. **Paula Dijkstra**, Chair elect of FIG Young Surveyors Network, Netherlands

TS01A – Gravity, Geoid and Vertical Datum Determinations 1

Tuesday, 17 June 09:00–10:45
Venue: Plenary Hall, KLCC
Commission: 5
Chair: Mr. **David Martin**, Chair, FIG Network on Standards, France
Rapporteur: Sr **Saiful Aman Sulaiman**, Malaysia

Kamaluddin Hj Talib, Saiful Aman Hj Sulaiman, Mohd Zainee Zainal, Jasmee Jaafar and Azahari Mohamed (Malaysia): Absolute & Relative GPS Orthometric Heights Using Regional Fitted Geoid (6810)
This is a peer reviewed paper.

Daniel Roman, Simon Holmes, Xiaopeng Li, Vicki Childers and Theresa Damiani (USA): GRAV-D: Using Aerogravity to Produce a Refined Vertical Datum (7303)

Basara Miyahara, Tomoaki Furuya, Tokuro Kodama, Toshihiro Yahagi and Masaki Murakami (Japan): The New Application of GEON-ET for Multi-GNSS Observation and Height Determination with New Japanese Geoid Model (7310)

TS01B – Ubiquitous Positioning and Kinematic Measurement 1

Tuesday, 17 June 09:00–10:45
Venue: Conference Hall 1, KLCC
Commission: 5 and 6
Chair: Mr. **Volker Schwieger**, Chair elect, FIG Commission 5, Germany
Rapporteur: Sr **Hazri Hassan**, Malaysia

Guenther Retscher (Austria): The Fourth Layer in Collaborative Navigation – Going Underground (6832)
This is a peer reviewed paper.

Allison Kealy (Australia), **Guenther Retscher** (Austria), **Charles Toth and Dorota Brzezinska** (USA): Collaborative Positioning – Concepts and Approaches for more Robust Positioning (7053)

Charles Toth, Dorota Brzezinska (USA), **Allison Kealy** (Australia) and **Guenther Retscher** (Austria): Personal Navigation and Indoor Mapping: Performance Characterization of Kinect Sensor-based Trajectory Recovery (7172)

Martina Stocker and Peter Duetschler (Switzerland): LBS-Mobile – A New Way of Handling Data (6972)

TS01C – Land Reforms

Tuesday, 17 June 09:00–10:45
Venue: Conference Hall 2, KLCC
Commission: 7
Chair: Mr. **Daniel Roberge**, Chair, FIG Commission 7, Canada
Rapporteur: Dr. **Kristin Land**, National Delegate, FIG Commission 7, Sweden

Munsung Koh (Republic of Korea): Efficient Land Registration in Jamaica (7075)

Andrus, N. Ukaejiofo and Ijeoma Nnaemeka (Nigeria): The Dilemma of Restructuring the Land Governance System in Nigeria (7169)

Jung-young Jung and Hyun-jung Ha (Republic of Korea): A Guideline for Establishing Digital Cadastral Information of National Land (7183)

Jan Van Bennekom-Minnema (Netherlands), **Jakob Riise** (Denmark) and **Ian Corker** (United Kingdom): Systematic Land Regularization in Lesotho (7311)

Gasant Jacobs (South Africa) and **Nadege Orlova** (France): Development and Implementation of Land Information Systems: Building an Effective Partnership to Reform Uganda's Land Administration and Management System (7320)

TS01D – Boundary Management

Tuesday, 17 June 09:00–10:45
Venue: Conference Hall 3, KLCC
Commission: 1 and 7
Chair: Sr **Tan Ah Bah**, Malaysia
Rapporteur: Sr **Abdul Aziz Jantan**, Malaysia

Buddhi Narayan Shrestha

(Nepal):
Case Study: Nepal-India Border Management and Its Challenges and Opportunities (6774)

Aune Rummukainen (Finland):
Sovereignty Islands Between Finland and Sweden (7149)

Haim Srebro (Israel):
FIG publication on International Boundary Making (7252)

TS01E – Web & GIS

Tuesday, 17 June 09:00–10:45
Venue: Room 301, KLCC
Commission: 3
Chair: Mr. **Yerach Doytsher**, Chair, FIG Commission 3, Israel
Rapporteur: Mr. **Enrico Rispoli**, Chair Elect, FIG Commission 3, Italy

Masakuni Nakayama, **Bhuvneshwar Prasad Sah**, **Raghunath Jha**, **Senthil Selvaraj** (Japan), **Yakubu Mohamed**, **Cudjoe Awudi**, **George Rockson Odame**, **Tina Dzibordi Wemegah** (Ghana) and **Jarno Hämäläinen** (Finland):
GNSS Supported Survey and Open Source Web GIS for Forest Inventory and Its Management (6876)
This is a peer reviewed paper.

Benni Purwonegoro (Indonesia):
WebGIS Role in the Indonesian Presidential Election in 2014 (6918)

Moha El-Ayachi, **Khalid El Hajari**, **Said Alaoui** and **Omar Jellabi** (Morocco):
The Geodetic Infrastructure Management via Web-Based Mapping Technology in Morocco (6979)

Kazimierz Beczek (Poland):
The Internet of Things: Are We at the Fringes of a Paradigm Shift in Geomatics? (7042)

Rudiney Pereira Soares, **Emanuel Silva** and **Laura Goergen** (Brazil):
Open Source Tools for Integrated Production Information on Forest Areas – Case Study: Spatial Analysis of Forest Fragments in Rio Grande Do Sul State, Brazil (7264)

TS01F – Expropriation 1

Tuesday, 17 June 09:00–10:45
Venue: Room 302, KLCC
Commission: 9
Chair: Ms. **Frances Plimmer**, Chair, FIG Commission 9, United Kingdom
Rapporteur: Mr. **Kauko Viitanen**, FIG Commission 9, Finland

Juhana Hiironen, **Kirsikka Niukkanen**, **Juha Ohrankämmen** and **Ari Laitala** (Finland):
'Margin of Error' in Property Valuations – Is There a Need for Safety Margins in Compulsory Acquisitions? (6819)
This is a peer reviewed paper.

Daniel Weldegebriel Ambaye (Ethiopia):
Compensation for Expropriation in Ethiopia and the UK: a Comparative Analysis (6821)
This is a peer reviewed paper.

Vince Mangioni (Australia):
Modernising Compensation Principles for the Regeneration of Land Uses in Highly Urbanised Locations (6844)
This is a peer reviewed paper.

Haicong Yu, **Ying Liu** and **Jie Sun** (China, PR):
Real Estate Valuation Based on 3D GIS for Compulsory Purchase and Compensation (7061)

TS01G – Informal Settlement Issues in Spatial Development, Planning and Governance 1

Tuesday, 17 June 09:00–10:45
Venue: Room 303, KLCC
Commission: 8
Chair: Mr. **Wafula Nabutola**, Chair, FIG Commission 8, Kenya
Rapporteur: Mr. **Kwame Tenadu**, Chair Elect, FIG Commission 8, Ghana

Achameleh Gashu Adam (Ethiopia):
Governing Institutions of Informal Settlements in the Peri-Urban Areas of Ethiopia, the Case of Bahir Dar (6823)

Reshma Shrestha, **Jaap Zevenbergen** (Netherlands), **Mahesh Banskota** (Nepal) and **Armind Tuladhar** (Netherlands):
"Decades of Struggle for Space": About the Legitimacy of Informal Settlements in Urban Areas (7095)

Rachelle Alterman (Israel):
Planning Laws, Development Controls and Social Exclusion: Lessons for Developing Countries (7165)

Joseph Salukvadze (Georgia):
Displacement and Resilience: Practices of Informal Place Making in the Cities of Georgia (7258)

Fahria Masum (Germany):
Challenges of Upgrading Housing in Informal Settlements: A Strategic Option of Incremental Housing (7265)

TS01H – Geospatial Techniques/ Algorithms 1

Tuesday, 17 June 09:00–10:45
Venue: Room 304, KLCC
Commission: 3
Chair: Mr. **Hartmut Mueller**, National Delegate, FIG Commission 3
Rapporteur: Mr. **Nurul Hawani Idris**, Malaysia

Alireza Hamedianfar, **Helmi Zulhaidi Mohd Shafri**, **Shattri Mansor** and **Noordin Ahmad** (Malaysia):
Detailed Urban Object-Based Classifications from Worldview-2 Imagery and LiDAR Data: Supervised Vs. Fuzzy Rule-Based (6795)
This is a peer reviewed paper.

Sevket Bediroglu, **Volkan Yildirim** and **Selçuk Erbas** (Turkey):
Application of GIS Analyzes with Cloud Computing (6925)

Eran Sadek Said Mohd Sadek and **Zulkiflee Latif** (Malaysia):
Modelling Tropical Forest Microclimate with Remotely-Sensed Data (6940)

TS01I – Curriculum and Core Surveying Knowledge

Tuesday, 17 June 09:00–10:45
Venue: Room 305, KLCC
Commission: 2
Chair: Mr. **Steven Frank**, Chair, FIG Commission 2
Rapporteur: Ms. **Liza Groenendijk**, Chair Elect, FIG Commission 2

Heiner Kuhlmann, **Volker Schwieger** (Germany), **Andreas Wieser** (Switzerland) and **Wolfgang Niemeier** (Germany):
Engineering Geodesy – Definition and Core Competencies (6962)

Poerbandono, **Kosasih Prijatna** and **Hernandi Andri** (Indonesia):
Geodesy and Geomatics Engineering Curriculum at the Institute of Technology, Bandung, Indonesia (6877)

Audrey Martin, **Kevin Mooney** and **Eugene McGovern** (Ireland):
Development of a New Msc in Geospatial Engineering (6864)
This is a peer reviewed paper.

Njike Chigbu, **Daniel Chukwuemeka Onukaogu** and **Michael Apeh** (Nigeria):
Harnessing the Use of Information & Communication Technologies (ICT) in Surveying and Geoinformatics Education in Tertiary Institutions in the South Eastern States of Nigeria (7014)

2014 FIG Director Generals Forum – Session 2

Tuesday, 17 June 11:30–13:00
Venue: Rooms 403 and 404, KLCC

Chair: Mr. **Bengt Kjellson**, Lantmäteriet, Sweden

- By invitation only

The 2014 FIG Director Generals Forum is supported by UN Habitat-GLTN.

FIG Member Associations Forum

Tuesday, 17 June 11:30–13:00
Venue: Room 402, KLCC
Chair: Sr **Mohammad Azmi Mohd Zin**, President of PEJUTA, Malaysia

This Forum brings together Presidents (or their representatives) or Heads of Delegation of Member Associations and provide them the opportunity to meet, network and discuss with one another trends and issues that's of importance to their membership and organizations around the world.

- By invitation only

UN Habitat-GLTN/FIG Joint Technical Session on Improving Women's Access to Land and Property

Tuesday, 17 June 11:30–13:00
Venue: Room 401, KLCC

Chair: Mr. **Cyprian Selebalo**, Land and GLTN Unit, UN-Habitat, Kenya

Rapporteur: Ms. **Robyn McCutcheon**, FIG Commission 1, Australia

The need for inclusive approaches to land administration and management needs to take into account gender dimensions. There are on-going efforts to reduce the barriers related to women's access to land and property. These include reviews and revisions of relevant policies and regulatory framework while also addressing issues related to economic, social and cultural norms. These initiatives challenge existing perceptions that there are no gender inequities in land administration and management. This Session seeks to review initiatives on addressing women's access to land and property and FIG's intention for a "women professional" network and proposing innovative approaches.

This joint session is also supported by FAO

2nd FIG Young Surveyors Conference

Tuesday, 17 June 11:30–13:00
Venue: Impiana Hotel
Commission: Young Surveyors Network

Chair: Ms. **Kate Fairlie**, Chair of FIG Young Surveyors Network, Australia

Rapporteur: Ms. **Paula Dijkstra**, Chair elect of FIG Young Surveyors Network, Netherlands

FIG Task Force on Surveyors and Climate Change – Meeting

Tuesday, 17 June 11:30–13:00
Venue: Room 306, KLCC

Chair: Mr. **John Hannah**, Chair, FIG Task Force on Surveyors and Climate

FIG Platinum Corporate Member Special Session: LX-KCSC Korea

Tuesday, 17 June 11:30–13:00
Press Center, KLCC

Chair: Dr. **Dekkie Tcha**, Director, Technology Research Department, LX, Republic of Korea

NEW feature: FIG Platinum Corporate members have been given the opportunity to compose a session in the technical programme of the congress.

- *New Cadastral Surveying Processes for the Geospatial Information Society in Korea.* Dr. **Dekkie Tcha**, Director of Technology Research Department in Spatial Information Research Institute, LX
- *LX's Overseas Projects and Way Forward.* Mr. **Koh, Mun-Sung**, Surveyor from Branch office of LX in Gwang-Ju city. LX's Overseas Projects and way forward
- *Statistics Survey based on Special Classification of Geospatial Information Industry in Korea.* Dr. **Park, Jung Hyun**, Dr. **Lee Jaiho** and Dr. **Heo Min**, Korean Association of Surveyor and Mapping.

TS02A – Gravity, Geoid and Vertical Datum Determinations 2

Tuesday, 17 June 11:30–13:00
Venue: Plenary Hall, KLCC
Commission: 5

Chair: Mr. **Nic Donnelly**, Geodetic Surveyor, New Zealand
Rapporteur: Sr **Shabudin Saad**, Malaysia

Vu Dinh Toan (British Virgin Islands):

A Method of Building the Local Geoid Model in Vietnam (6788)
This is a peer reviewed paper.

Saiful Aman Hj Sulaiman, Kamaluddin Hj Talib, Othman Mohd Yusof, Jasmee Jaafar and Mat Akhir Md Wazir (Malaysia): Geoid Model Estimation Without Additive Correction Using KTH Approach for Peninsular Malaysia (6809)
This is a peer reviewed paper.

Dyah Pangastuti and Arisauna Maulidyan Pahlevi (Indonesia): Coastal Gravity Anomalies from Retracked Geosat/GM: A Case Study in Bali, Indonesia (7148)

Ramin Kiamehr (Iran): Analysis of Earthquake Patterns in Iran Based on the Deflection of Vertical Components of the EGM2008 Global Geoid Model (7066)

Hussein Abd-Elmotaal (Egypt): Egyptian Geoid using Ultra High-Degree Tailored Geopotential Model (6856)
This is a peer reviewed paper.

TS02B – Ubiquitous Positioning and Kinematic Measurement 2

Tuesday, 17 June 11:30–13:00
Venue: Conference Hall 1, KLCC
Commission: 5 and 6

Chair: Mr. **Allison Kealy**, National Delegate, FIG Commission 5
Rapporteur: Sr **Shabudin Saad**, Malaysia

Jin Woo Jung, Dae Joong Moon, Ji Won Jung, Byeung Leul Lee and Seung Jae Lee (Republic of Korea): A Performance Test of a 3-Axis Accelerometer and Modal Analysis (7204)

Sin Da Tsai, Edward H. Wang (Chinese Taipei) and **Hin Yew Kong** (Malaysia): An Innovative 3D Interactive Platform Sourcing Geographic Information Combining Operating Photogrammetry Airborne LiDAR and Mobile Measurement System (7039)

Mahmoud Abd Rabbou and Ahmed El-Rabbany (Canada): Tightly Coupled Integration of Stand-alone GPS and MEMS-based Inertial Systems (7269)

Haiyan Guan (Canada), **Yongtao Yu** (China, PR), **Haocheng Zhang** (Cayman Islands), **Jonathan Li** and **Cheng Wang** (China, PR): Automated Extraction of Road Surface Information from Mobile Laser Scanning Point Clouds: State-of-the-Art (7152)

TS02C – Cadastre and Land Registration e-Services 1

Tuesday, 17 June 11:30–13:00
Venue: Conference Hall 2, KLCC
Commission: 7

Chair: Mr. **Peter Laarakker**, Netherlands
Rapporteur: Mr. **David Coleman**, President, GSDIA, Canada

Emmanuel Tembo, Johnson Kampamba and Boipuso Nkwae (Botswana): Land Registration in a Digital Environment (6786)

Nelson Wijenayake (Sri Lanka): From Inventory Based Digital Archives to Corporate-LIS in Sri Lanka (6912)

Michel Magis and Jaap Zevenbergen (Netherlands): Towards Sustainable Land Administration Systems: Designing for Long-Term Value Creation (6969)

Gyula Iván and András Osskó (Hungary): Improvement of Effectiveness – Present Developments in Hungarian Land Administration (6983)

TS02D – Land Consolidation

Tuesday, 17 June 11:30–13:00
Venue: Conference Hall 3, KLCC
Commission: 7
Chair: Mr. **Datuk Sr Hamid Ali**, Malaysia
Rapporteur: Mr. **Siti Aekbal Salleh**, Malaysia

Turgut Ayten and Tayfun Cay (Turkey):

The Effect of Land Consolidation Components on Parcellation Plans (6857)

Marije Louwsma, Marco van Beek and Bert Hoeve (Netherlands):

A New Approach: Participatory Land Consolidation (7020)

Gaye Onursal Denli and Hayri Hakan Denli (Turkey):

The Effect of the Land Consolidation on Urban Development (7104)

Alexander Sagaydak and Anna Sagaydak (Russia):

Development of Agricultural Land Market and Land Consolidation in the Russian Federation (7336)

TS02E – 3D Modelling

Tuesday, 17 June 11:30–13:00
Venue: Room 301, KLCC
Commission: 3
Chair: Datuk Sr Dr. **Abdul Kadir Taib**, Malaysia
Rapporteur: Mr. **Nurul Hawani Idris**, Malaysia

Khairul Hafiz Sharkawi Sharkawi and Edward Eric Duncan (Malaysia):

The Updating Process for 3D City Model Objects (6893)

Ismail Ma'arof, Mohd Saparina Ab Talib and Khairil Afendy Hashim (Malaysia):

3D Model Generation and Visualization of Archeological Remains in World Historical Sites: Santiago Bastion (Wilhelmus), a Famosa, Malacca (6895)

Ahmed Hamruni (Libya):

The Use of Different Data Sets in 3-D Modelling (6968)

Haicong Yu and Ying Liu (China, PR):

Using 3D Geographic Information System to Improve Sales Comparison Approach for Real Estate Valuation (7057)

Ewa Debinska (Poland):

The Application of 3D Network Analyses for Determine the Time Zones of the Evacuation in Multi-Storey Building (7159)

TS02F – Expropriation 2

Tuesday, 17 June 11:30–13:00
Venue: Room 302, KLCC
Commission: 9
Chair: Dato' Sr **Lau Wai Seang**, Malaysia
Rapporteur: Mr. **Norhisham Shafie**, Malaysia

Catur Kuat Purnomo, Wahyu Sari Sabekti and Dian Permana Sari (Indonesia):

Factors and Spatial Pattern Analysis of Land Price (7113)

Nira Orni and Rachele Alterman (Israel):

The Road from Planning to Expropriation: A Cross-national Analysis (7251)

Fatih Iscan and Tayfun Cay (Turkey):

The Influence of Single Criteria Based Valuation to the Land Evaluation in Land Consolidation Projects (6990)

TS02G – Urban and Rural Land Use Planning 1

Tuesday, 17 June 11:30–13:00
Venue: Room 303, KLCC
Commission: 8
Chair: Prof. Sr Dr. **Mazlan Hashim**, Malaysia
Rapporteur: Sr **Ahmad Azman bin Ghazali**, Malaysia

Vasily Nilipovskiy, Ekaterina Ananicheva (Russia), **Yu Zhang** (China, PR) and **Txi Kim Dung Le** (Viet Nam):

Sustainable Development of the Rural Territories and the Social Demographic Aspects of the Land Management (6884)

Siti Nur Afiqah Aman and Zulkiflee Abd Latif (Malaysia):

Spatial Mapping of Tropical Landslides Area Using LiDAR (6938)
This is a peer reviewed paper.

Ali Erdem Ozcelik, Recep Nisanci, Tahsin Yomralioglu, Osman Demir and Bayram Uzun (Turkey):

Spatial Data Infrastructure for Sustainable Tea Agricultural Land Management in Turkey (6945)

Faus Tinus Handi Feryandi, Wahyu Sari Sabekti, Budi Jaya Silalahi and Asmadi Adnan (Indonesia):

Evaluation of Indonesian Land Base Map for Cadastral Application (7011)

Alexandra Weitkamp, Pia Steffenhagen and Winrich Voss (Germany):

Civic Engagement – a New Self-Understanding of Villages? (7023)

TS02H – Geospatial Techniques/ Algorithms 2

Tuesday, 17 June 11:30–13:00
Venue: Room 304, KLCC
Commission: 3
Chair: Prof. Sr Dr. **Wan Muhammad Aminuddin Wan Hussin**, Malaysia
Rapporteur: Sr **Ng Eng Guan**, Malaysia

Sunday Adefoye (Nigeria):

Quantitative Image Classification Accuracy Assessment Program for Sustainable Geospatial Technology Applications (6824)
This is a peer reviewed paper.

Souhila Boutarfa, Lynda Bouchemakh and Youcef Smara (Algeria):

Speckle Modeling and Turbo Filtering of PolSAR Images (6977)

Winnie Shiu (Hong Kong SAR, China):

Use of GIS and BIM in the Development of Public Housing Estates in Hong Kong (7013)

Alexander Karpik and Vladimir Seredovich (Russia):

The Contemporary Role of Geospatial Information Technologies in Sustainable Territorial Management (7097)

Horyia Khenouchi and Youcef Smara (Algeria):

Improved Oil Slick Identification Using CMOD5 Model for Wind Speed Evaluation on SAR Images (7121)

Yudo Prasetyo (Indonesia), **Joshaphat Tetuko Sri Sumantyo** (Japan), **Ishak Hanafiah Ismullah, Hasanudin Zainal Abidin and Ketut Wikantika** (Indonesia):

Utilization Of PS-InSAR Method Optimizing In Land Subsidence Disaster Mitigation In Bandung City (Indonesia) (7128)

TS02I – Teaching Methodologies

Tuesday, 17 June 11:30–13:00
Venue: Room 305, KLCC
Commission: 2
Chair: Prof. Sr Dr. **Alias Abdul Rahman**, Malaysia
Rapporteur: Assoc. Prof. Sr **Kamaluddin Mohd Omar**, Malaysia

Odil Akbarov (Uzbekistan), **Bela Markus and Andrea Podor** (Hungary):

Development of Modern Education in Geoinformatics for Enabling Sustainable Development in Uzbekistan (7151)

Friedrich Keller, Sören Leitz, Steffen Kagerah, Gordeon Thie and Harald Sternberg (Germany):

Current Developments in the HCU Mobile Mapping Systems and Its Use in Research and Teaching (6995)

Siew Siew Weng and Ibrahim Shahabuddin (Malaysia):

Underground Utility Detection Survey and Mapping. Land Surveyors Board of Malaysia Certification Course (7143)

Jasper N Mwenda and Peter Ngau (Kenya):

Training and Human Capacity Building in the Land Sector in the Context of Implementation of New Land Policies and Reforms in Land Administration Systems: Some Reflections from Kenya (7271)

Tuesday, 17 June

Opening Ceremony

Tuesday, 17 June 14:30–16:00
Venue: Plenary Hall, KLCC

The XXV FIG Congress will be officiated by the Honourable Dato' Sri **Mohd Najib bin Tun Haji Abdul Razak**, Prime Minister of Malaysia. The opening ceremony will provide a spectacular introduction to the congress, its theme, and its unique location – a festive start of the Congress.

PS01 – Plenary Session 1

Tuesday, 17 June 16:30–18:00

Venue: Plenary Hall, KLCC

Chair: Prof. **Stig Enemark**, Honorary President FIG, DdL, Denmark

General Focus:

Humanity faces a series of challenges including that of undernourishment, shelter, climate change and economic progress. These challenges are present and the Profession must engage these challenges with its sciences, technologies, knowledge and practices.

- Hon. Dato' Sri **Mustapa Mohamed**, Minister of International Trade and Industry, Malaysia
- Mr. **Gregory Scott**, GGIM Advisor, Statistics Division, United Nations Department of Economic and Social Affairs, United States
- Dr. **Clarissa Agustinus**, Global Land Tool Network, UN-Habitat, Kenya

Malaysian Evening / Foundation Dinner

Tuesday, 17 June 20:00–23:00

Ground Floor, Exhibition Hall 1, KLCC

The dinner offers an enchanting night whilst enjoying a sumptuous tailor-made stall concept dinner that emulates hawker style scenario. You may also experience a brief but enjoyable insight into Malaysia's rich and diverse cultural heritage of batik painting, basket weaving, wood carving, songket weaving, pewter smithing, henna art painting and Chinese calligraphy

- Partly sponsored by Trimble
- Ticket is required

Wednesday, 18 June

FIG Commission Annual Meetings

Wednesday, 18 June 08:00–09:00

Venue: KLCC

Commission: 6, 7, 8, 9 and 10

Meetings in following rooms:

- Commission 6: 305
- Commission 7: 306
- Commission 8: 304
- Commission 9: 302
- Commission 10: 303

PS02 – Plenary Session 2

Wednesday, 18 June 09:00–10:45

Venue: Plenary Hall, KLCC

Chair: Dato' Dr. **Sallehuddin Ishak**, Deputy Director General I, Department of Lands and Mines Malaysia

General Focus:

The Profession has key roles towards the betterment of society, environment and economy and need to attend to emerging issues and trends.

- Mr. **Paul Munro-Faure**, Deputy Director, Climate, Energy and Tenure Division, Natural Resources Management and Environment Department, Food and Agriculture Organization of the United Nations, Italy
- Mr. **Keith C. Bell**, and Mr. **Klaus Deininger**, The World Bank, Sustainable Development Department Social, Environment & Rural Development (EASER), East Asia Pacific Region, United States
- Prof. **Chris Rizos**, President, International Association of Geodesy (IAG), Australia

Special Carbon Offset Programme – Let's Meet & Green

Wednesday, 18 June 11:00–14:00

Forest Research Institute of Malaysia (FRIM), Kepong, Kuala Lumpur

Chair: Sr **Mohammad Azmi Mohd Zin**, President of PEJUTA, Malaysia

- Presidents of Member Associations, Head of Delegation, Director Generals/ Surveyor Generals and Delegates are encouraged to contribute
- Registration needed

Wednesday, 18 June 2014 11:30–13:00

UN Habitat-GLTN/FIG Joint Technical Session on Valuation of Unregistered Land (VaLURL)

Wednesday, 18 June 11:30–13:00

Venue: Rooms 403 and 404, KLCC

Chair: Ms. **Frances Plimmer / Liao JunPing Patrick**, FIG Commission 9

Rapporteur: Mr. **William McCluskey**, University of Ulster

There is general consensus that about seventy percent (70%) of land ownership units in developing countries are not formally registered and the initiatives for land registration have yet to deliver the desired results. This adversely affects owners of unregistered land, who in most cases are the disadvantaged groups and cannot access valuation services. This session will consider appropriate initiatives to support the valuation of unregistered land and properties and the need to develop a tool to address this gap. This tool will need to be scientific and adopt robust practise standards and can benefit these vulnerable groups.

FIG/World Bank: Fit-for-Purpose / Pro-Poor Land Management

Wednesday, 18 June 11:30–13:00

Venue: Room 402, KLCC

Chair: Mr. **Robin McLaren**, FIG Commission 3 Delegate

Rapporteur: Mr. **Christiaan Lemmen**, FIG Commission 7 Delegate

Stig Enemark (Denmark), **Keith Bell** (Australia), **Christiaan Lemmen** (Netherlands) and **Robin McLaren** (United Kingdom):

Building Fit-for-Purpose Land Administration Systems (7210)

Gavin Adlington (USA):

Building Fit-for-Purpose Land Administration Systems – World Bank Experience (7433)

Christiaan Lemmen, **Jaap Zevenbergen** (Netherlands) and **Stig Enemark** (Denmark):
Pro Poor Land Administration (7274)

Standards Networks / Roundtable

Wednesday, 18 June 11:30–13:00

Venue: Room 401, KLCC

Chair: Mr. **David Martin**, Chair, FIG Network on Standards

The Standards network is responsible for building and maintaining relations with the different standardisation bodies, proposing priorities on FIG's standardisation activities and ensuring information flow on standardisation to FIG members. One of the principal ways these goals are accomplished is through a Standards Network meeting held during FIG working weeks and Congresses.

TS03A – Gravity, Geoid and Vertical Datum Determinations 3

Wednesday, 18 June 11:30–13:00

Venue: Plenary Hall, KLCC

Commission: 5

Chair: Mr. **Graeme Blick**, National Delegate, FIG Commission 5, New Zealand

Rapporteur: Sr **Wan Mohamad Darani Ab. Rahman**, Malaysia

Victus Uzodinma, Johnson Oguntuase, Raphael Ehigiator, Emmanuel Onah and Chidinma Chike (Nigeria):

Validation of EGM2008-Based Orthometric Heights in a Micro Environment in Nigeria (7186)

Bagas Triarahmadhana and Leni Heliani (Indonesia):

Evaluation of GOCE's Global Geopotential Model to The Accuration of Local Geoid (Case Study on Island of Java, Indonesia) (7239)

Ramazan Yanar (Turkey) and **Ali Saad Alomar** (Saudi Arabia):

Determination of Geoid in The Kingdom of Saudi Arabia Using Global Gravity Model and GPS/Benchmark Data: A Case Study (6791)

Magsad Gojamanov (Azerbaijan):

The Development of the Normal Heights System in Azerbaijan by the Satellite Methods (7387)

2nd FIG Young Surveyors Conference

Wednesday, 18 June 11:30–13:00

Venue: Impiana Hotel

Commission: Young Surveyors Network

Chair: Ms. **Kate Fairlie**, Chair of FIG Young Surveyors Network, Australia

Rapporteur: Ms. **Paula Dijkstra**, Chair elect of FIG

Young Surveyors Network, Netherlands

TS03B – Multi-GNSS Environment and Precise Point Positioning

Wednesday, 18 June 11:30–13:00

Venue: Conference Hall 1, KLCC

Commission: 5

Chair: Dr. **Chris Rizos**, Australia

Rapporteur: Sr **Alwi Mohd Noor**, Malaysia

Kazutoshi Sato (Japan):
Asia Oceania Multi-GNSS Demonstration Campaign (7351)

Suelynn Choy, Yong Li, Thomas Grinter (Australia), **Yaka Wakabayashi** (Japan) and **Mohammad Choudhury** (Australia):

Performance of Real-Time Precise Point Positioning Using MADOCA-LEX Augmentation Messages (6906)

This is a peer reviewed paper.

Akram Afifi and Ahmed El-Rabbany (Canada):

Precise Point Positioning Using Combined GPS and GALILEO Observations (7286)

GLTN Partners (Professional Cluster) Meeting

Wednesday 18 June

07:30–08:45

Venue: Room 308, KLCC

- By invitation only

TS03C – Cadastre and Land Registration e-Services 2

Wednesday, 18 June 11:30–13:00
Venue: Conference Hall 2, KLCC
Commission: 7
Chair: Mr. **Michael Barry**, National Delegate, FIG Commission 7
Rapporteur: Prof. **Moha El-Ayachi**, Morocco

Louie Balicanta and **Rosalia Balicanta** (Philippines):
The Systematic Land Verification (SiLVer) Protocol (7105)

Ian Harper (Australia):
Managing Inaccurate Historical Survey Records in a Future Accurate Digital World (7184)

Randolf Vicente (Philippines):
Development of a Web-based Cadastral Survey Project Management Information System in Support to the Lands Management Bureau of the Philippine Government (7246)

Jaafar Jasmee, Suriati Juhari and **Roslina Idris** (Malaysia):
Enhancement of Parcel Based Spatial Information Via Quick Response (QR) Code (6861)
This is a peer reviewed paper.

TS03D – Climate Change – Commission 7 and Task Force on Surveyors and Climate Change

Wednesday, 18 June 11:30–13:00
Venue: Conference Hall 3, KLCC
Chair: Mr. **Daniel Roberge**, Chair, FIG Commission 7, Canada
Rapporteur: Mr. **Bjarte Mjoes Leiv**, National Delegate, FIG Commission 7

Doan Huong Mai and **Mai Dinh Yen** (Viet Nam):
Preliminary Assessment of Biodiversity/Ecosystems Vulnerability by Climate Change of Hanoi City and Suggestion a System of Mitigation Measures for Them (6808)

Masaru Kaidzu (Japan):
Land Management Issue Related to Recovery from East Japan Great Earthquake (7054)

Adish Khezri and **Arbind Tuladhar** (Netherlands):
Responding to Climate Change: Carbon Rights and Data Sharing Within Land Administration (7131)

Nihat Enver Ulger and **Tahsin Yomralioglu** (Turkey):
An Assessment on Applications of Development Plans in Turkey (7142)

John Hannah (New Zealand):
Climate Related Sea Level Change – An Inconvenient Fact or an Irritating Fiction? (6961)

TS03F – Surveying for a Safer and More Sustainable Life

Wednesday, 18 June 11:30–13:00
Venue: Room 302, KLCC
Commission: 9
Chair: Sr **Nordin Daharom**, Malaysia
Rapporteur: Mr. **Aina Edayu Ahmad**, Malaysia

Manish Sacklecha and **Samir Bajpai** (India):
Valuation of Buildings with Greenness Perspective (6840)

Simon Forbes, Tim Goodhead and **Cletus Moobela** (United Kingdom):
Life-Cycle Maintenance Cost Implications of Heritage Properties: Valuation Challenges and Opportunities for Further Research (6976)

Sebastian Kropp (Germany):
Flood Risk and Property Values (7016)

Tina Beale (Jamaica):
The Valuation of Holiday Hotels. A Case Study of Negril, Jamaica (7203)

TS03G – Urban and Rural Land Use Planning 2

Wednesday, 18 June 11:30–13:00
Venue: Room 303, KLCC
Commission: 8
Chair: Prof. Sr Dr. **Mazlan Hashim**, Malaysia
Rapporteur: Sr **Ahmad Azman bin Ghazali**, Malaysia

Joseph Odumosu, Oluibukun Ajayi and **Ekundayo Adesina** (Nigeria):
Modelling Surface Runoff and Mapping Flood Vulnerability in Lagos State from Digital Elevation Model (6889)
This is a peer reviewed paper.

David Janssen (Australia) and **David Collison** (Canada):
Automating Data Accuracy from Multiple Collects (7096)

Budi Jaya Silalahi, Faus Tinus Handi Feryandi, Memby Untung Pratama, Purnomo Hadi and **Gunawan** (Indonesia):
Proposing A New Paradigm of Sustainable Development in Indonesia Through Indonesian Land Strategic Programs (7109)

Sumaryo Joyosumarto, Subaryono Subaryono, Sobar Sutisna and **Djurdjani Wardaya** (Indonesia):
Geospatial Information and Regional Boundary Disputes in Regional Boundary Demarcation in the Regional Autonomy in Indonesia (7175)

TS03H – Geospatial Techniques/ Algorithms 3

Wednesday, 18 June 11:30–13:00
Venue: Room 304, KLCC
Commission: 3
Chair: Ms. **Winnie Shiu**, Co-Chair WG 1, FIG Commission 1, Hong Kong, SAR China
Rapporteur: Sr **Mat Yunus Jaafar**, Malaysia

Dhakar Shital (Nauru):
GIS Modeling of Impact of Forest Fire in Runoff Pattern in a Mediterranean Catchment (6841)
This is a peer reviewed paper.

Suraya Jamaluddin, Abdul Wahid Rasib, Muhammad Zulkarnain Abd Rahman, Wan Hazli Wan Kadir and **Abdul Razak Mohd Yusoff** (Malaysia):
Extracting Topographic Information in Tropical Rain Forest Using IfSAR (7185)

Saeed Nadi (Iran):
A Proposed Architecture for Distributed and Version-Based Geospatial Data Sharing (7306)

Falk Wuerriehausen and **Hartmut Mueller** (Germany):
Crossborder Interoperability of Land-Use Information (7332)

Tingting Xu (China, PR):
GeoDesign Research on Land Use Changing Spatial-Temporal Database (7366)

TS03I – Marketing and Managing Professional Survey Education

Wednesday, 18 June 11:30–13:00
Venue: Room 305, KLCC
Commission: 2
Chair: Mr. **Jean-Yves Pirlot**, National Delegate, FIG Commission 2
Rapporteur: Prof. **Murat Meha**, National Delegate, FIG Commission 2

Liza (E.M.C.) Groenendijk (Netherlands):
The Meaning of Student Knowledge. The Case of the International Master Program in Land Management, KTH, Sweden (7017)

Eugene McGovern and **Avril Behan** (Ireland):
Geomatics and Developments in BIM Education in Ireland (7356)

Paula Dijkstra and **Bettine Baas** (Netherlands):
Exchange of Best Practices of GEO Education to Meet Changing Labour Market Needs in Europe (7230)

Joseph Owusu, Jeremiah Kwasi Owusu and **Yaw Poku Gyamfi** (Ghana):
Infrastructural Improvement in Basic Schools for a Sustainable Formal Education. The Way Forward in GIS Environment (6967)

2014 FIG Director Generals Forum – Session 3

Wednesday, 18 June 14:30–16:00
 Venue: Rooms 403 and 404, KLCC
 Chair: Mr. **Kees De Zeeuw**, Kadaster International, Netherlands
 Rapporteur: Mr. **Christiaan Lemmen**, Kadaster International, Netherlands

The Annual FIG Director Generals Forum brings together Chief Executives or Director Generals (or their representatives or nominees) of national (or provincial) agencies and FIG Affiliate Membership that has responsibility over mapping, cadastral, valuation, planning and development, land administration and management from around the world. 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. The Forum will also seek approaches to secure, support, sustain and safeguard land and property rights for all, draw upon appropriate experiences and good practices to further improved efficiency and better governance within the land sector. Enhancing effectiveness of land sector agencies is necessary at the onset of the Post-2015 Development Agenda.

- By invitation only

The 2014 FIG Director Generals Forum is supported by UN Habitat-GLTN

2nd FIG Young Surveyors Conference

Wednesday, 18 June 14:30–16:00
 Venue: Impiana Hotel
 Commission: Young Surveyors Network
 Chair: Ms. **Kate Fairlie**, Chair of FIG Young Surveyors Network, Australia
 Rapporteur: Ms. **Paula Dijkstra**, Chair elect of FIG Young Surveyors Network, Netherlands

2014 FIG Academic Members Forum – Session 1

Wednesday, 18 June 14:30–16:00
 Venue: Room 402, KLCC
 Chair: Ms. **Liza Groenendijk**, Chair Elect of FIG Commission 2, Netherlands

The 2014 FIG Academic Members Forum is the platform within the XXV FIG Congress where the Academic Members of FIG and other academicians gather to discuss about academic responsibilities and prepare actions. This year's Forum will focus on how the Voluntary Guidelines can be implanted into professional education and curriculum development, and in research and knowledge sharing. The Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security promote secure tenure rights and equitable access to land, fisheries and forests as a means of eradicating hunger and poverty, supporting sustainable development and enhancing the environment.

- By invitation only

The 2014 FIG Academic Members Forum is supported by FAO

Innovative Land Administration Systems. Well-Functioning Cadastral Systems – Examples from the Nordic Countries 1

Wednesday, 18 June 14:30–16:00
 Venue: Room 306, KLCC
 Chair: Mr. **Mikael Lilje**, Chair, FIG Commission 5
 Rapporteur: Mr. **Pekka Halme**, President, Finnish Association of Geodetic and Land Surveyors

Henning Elmstroem (Denmark) and **Lars Jansson** (Sweden): Nordic Session – Introduction (7022)

Juulsager Torben (Denmark) and **Ewa Swensson** (Sweden): Transparent Cadastral System – in Both a Private and Public Task Performance (6957)

French Speaking Session 1

Wednesday, 18 June 14:30–16:00
 Press Center, KLCC
 Chair: Mr. **François Mazuyer**, President of Federation des Géomètres Francophones, FGF, France
 Rapporteur: Mr. **Yousfi Khalid**, Morocco

Marc Vanderschueren (Belgium): Identification Cadastrale Pré-alable (PreCad) au Royaume de Belgique Utilisation de la Référence d'un Plan de Délimitation et du Nouvel Identifiant Parcellaire Réserve pour cette Parcelle (7321)

Khalid Yousfi (Morocco): Le Role de l'Ingenieur Géomètre Topographe dans La Bonne Gouvernance du Foncier (7362)

Claire Galpin (France): Frameworks, Guidelines, Land Policies in Africa: Which Place for Women? (7375)

Jean-François Dalbin (France): Simplified Code for Condominiums at the Use of Emerging Countries (7376)

Supported by UN-Habitat/GLTN

Jakob Højgaard-Geraae

(Denmark): Public -Private Collaboration Model in the Cadastral Workflow in Denmark (7244)

Arvo Kokkonen and Pekka Halme (Finland): Building the Organization to Improve the Services and the Effect in the Society (7345)

Margret Hauksdottir (Iceland): Multipurpose Use of the Cadaster (7350)

TS04A – UN GGIM AP/FIG/ IAG/UN-ICG Reference Frames in Practice – The Future

Wednesday, 18 June 14:30–16:00
 Venue: Plenary Hall, KLCC
 Commission: 5
 Chair: Dr. **John Dawson**, UN-GGIM-AP, Australia
 Rapporteur: Mr. **Rob Sarib**, National Delegate, FIG Commission 5

This is an open forum to discuss the future activities of workshops and seminars to develop reference frames in the Asia Pacific region. Invited presentations on topics such as Asia Pacific Geodetic Infrastructure: Progress, challenges and future opportunities.

John Dawson (Australia): Adding Values to Geodetic Infrastructure in Malaysia

Azhari Bin Mohamed (Malaysia): IAG Regional Dense Velocity Project and its Importance to Surveying and Mapping Organisations within the Asia Pacific Region

João Torres (Portugal): Vertical Height Systems – Asia Pacific Region

Hungkyu Lee (Republic of Korea): GEONET, Japan's Nationwide CORS Network and Its Applications

Yuki Kuroishi (Japan): Status of the Reference Frame and/or Geodetic Infrastructure in the Pacific Islands Region

Viliami Folau (Tonga)

TS04B – Laser Scanning Techniques and Applications 1

Wednesday, 18 June 14:30–16:00
 Venue: Conference Hall 1, KLCC
 Commission: 5 and 6
 Chair: Sr Dr. **Noordin Ahmad**, Malaysia
 Rapporteur: Sr **Engku Mohd Adlin Engku Habib**, Malaysia

Hamza Alkhatib, Claudius Schmitt and Ingo Neumann (Germany): Spatial Approximation of Terrestrial Laser Scanner Profiles by Considering Observations with Stochastic Information (7297)

Luka Babic, Almin Dapo and Bosko Pribicevic (Croatia): Application of 3D Laser Scanning for Deformation Measurement on Industrial Objects (7235)

Francis Tham (Australia): Mitigation of the Impacts of Climate Change – Surveyor's Role (7197)

Khalil Al-Manasir (China, PR): Image-Based Registration Method for Terrestrial Laser Scanner Data (7191)

Alexander Seredovich, Andrey Ivanov and Vladimir Seredovich (Russia): Geodetic Monitoring of Arch-Span Bridge Construction in Novosibirsk Using Laser Scanning (7144)

Maxim Altyntsev and Roman Popov (Russia): The Analysis of GPS Signal Short-term Loss Influence on the Accuracy of Mobile Laser Scanning Data (7115)

TS04C – Cadastre and Land Administration Models 1

Wednesday, 18 June 14:30–16:00
 Venue: Conference Hall 2, KLCC
 Commission: 7
 Chair: Mr. **Christiaan Lemmen**, FIG Delegate, Commission 7, Netherlands
 Rapporteur: Mr. **Libor Tomandl**, National Delegate, FIG Commission 7

Zhang Haodong and Tang Conrad (Hong Kong SAR, China): A Multi-Criteria Performance Assessment Model for Cadastral Survey Systems Assessment (6860)

Kean Huat Soon (Singapore): A Proposed Framework for Achieving High Level Automation in Cadastral Processing (6971)

Nur Amalina Zulkifli, Alias Abdul Rahman, Hasan Jamil, Chee Hua Teng, Tan Liat Choon, Looi Kam Seng and Chan Keat Lim (Malaysia) and **Peter van Oosterom** (Netherlands): Towards Malaysian LADM Country Profile for 2D and 3D Cadastral Registration System (6924)
This is a peer reviewed paper.

Charles Paradzayi, Robert Mapamula and Tinashe Mtariswa (Zimbabwe): Investigating the Conformity of the Zimbabwe Land Administration System to the Land Administration Domain Model Standard (ISO 19152) (7110)

TS04D – Land Administration Country Case Study 1

Wednesday, 18 June 14:30–16:00
Venue: Conference Hall 3, KLCC
Commission: 7
Chair: Dato' Sr **Mohd Noor bin Isa**, Malaysia
Rapporteur: Sr **Ahmad Sanusi Che Cob**, Malaysia

Davut Güney, Abdullah Burak Keser, Nihat Erdogan, Ismail Dursun and Mehmet Fatih Diri (Turkey): Sustainable Development and Effective Land Management: GDRLC, Turkey (6923)

Vedran Car, Jelena Car and Dino Dragun (Croatia): Cadastral Survey in the Process of Modernization and Actualization of the Croatian Cadaster System and Its Adjusting with Land Management Register (6942)

Martijn Rijdsdijk (Netherlands): Full Automatically Generated True Orthophotos and Sensational Dense Matching Techniques in Cadastral Applications: Innovative Improvements of Surveying (6978)

Seija Kotilainen (Finland): Developing Conflict Resolution in Highway and Railway projects in Finland – Perspective of Real Property Owner (6980)

TS04E – GIS & Cartography

Wednesday, 18 June 14:30–16:00
Venue: Room 301, KLCC
Commission: 3
Chair: Sr **Ahmad Sanusi Che Cob**, Malaysia
Rapporteur: Sr **Mat Yunus Jaafar**, Malaysia

Nurul H Idris, Fathin Nazri (Malaysia), **Mike Jackson** (United Kingdom), **Mohamad Said** and **Mohamad H I Ishak** (Malaysia): Semi-Automated Metadata Detection for Assessing the Credibility of Map Mashup (6900)
This is a peer reviewed paper.

Julio Neira (Chile): Spatial Information Management and Workflow at IGM GDB ("Latitud Sur Project" – 1:25,000 Cartographic Production) (6801)

Anthony Adeoye (Nigeria): Towards the Development of Geospatial Mapping of Financial Institutions in Nigeria: Opportunities and Challenges (7168)

Niendyawati Supardan and Eko Artanto (Indonesia): Unmanned Aerial Vehicle (UAV) for the Outermost Small Island Mapping as an Alternative Method for Collecting Geospatial Data (7177)

TS04F – The Real Estate Market

Wednesday, 18 June 14:30–16:00
Venue: Room 302, KLCC
Commission: 9
Chair: Mr. **Dennis Webb**, National Delegate, FIG Commission 5, New Zealand
Rapporteur: Mr. **Mr Dennis Webb**, United States

Adejoke Oladapo (Nigeria): Attitudes of Claimants' to Variation in Compensation for Compulsory Land Acquisition in Ondo State, Nigeria (6820)

Wilfred Kwabena Anim-Odame (Ghana): Real Estate Market Development in Ghana: a Quantitative Approach (6760)
This is a peer reviewed paper.

Vasily Nilipovskiy (Russia): Land Resources as a Basis of the National Wealth and Economic Growth (6879)

Andrayani Andrayani, Didik Wihardi and Yuliana Susilowati (Indonesia): The Pattern of Land Value in Bodetabek Area (7178)

Alexander Woestenburg (Netherlands): The Issue of Value and Price in Land Market Research (7255)

TS04G – Urban and Rural Land Use Planning 3

Wednesday, 18 June 14:30–16:00
Venue: Room 303, KLCC
Commission: 8
Chair: Dr. **Eran Sadek Said Md Sadek**, Malaysia
Rapporteur: Mr. **Khairul Hafiz Sharkawi**, Malaysia

Halil Ibrahim Inan and Ismail Dursun (Turkey): Methodology for the Production and Updating of Agricultural Land Use/Cover Data Set (7260)

Mweembe Muleya Mudenda (Zambia): Poverty for Sale: the Socio-Economic Impact of the People of Sinazongwe (7291)

Tina Dzigbordi Wemegah and Edward Attimo Amihyiah Kwesi (Ghana): Land Grabbing in the Oil and Gas Regions of Ghana– Emerging Problems and Challenges (7312)

Lilik Budi Prasetyo, Agung Budi Harto, Deni Suwardhi, Soni Darmawan and Chairuddin (Indonesia): Estimation of Wetland in Indonesia with Multitemporal Satellite Imagery Extraction Model-based Neural Network (NN), Genetic Algorithm (GA) and Fuzzy Logic (7107)

TS04H – NSDI/SDI 1

Wednesday, 18 June 14:30–16:00
Venue: Room 304, KLCC
Commission: 3
Chair: Prof. **Hartmut Mueller**, National Delegate, FIG Commission 3, Germany
Rapporteur: Sr **Azlim Khan Abdul Raof Khan**, Malaysia

Coral Gonzalez, Julio Neira and Colonel Riquelme (Chile): Spatial Data Infrastructure, IDE-CHILE (SNIT) (6802)

Punya P. Oli (Nepal): Preparation of Database for Urban Development (6817)

Aart Jan Klijnjan and Rik Ebbeling (Netherlands): SDI, Key Registers and Ghanging Role of NMCA's (7120)

Tahsin Yomralioglu and Arif Cagdas Aydinoglu (Turkey): Policies and Standards for Building Turkey National GIS Infrastructure (7220)

Heri Sutanta, Trias Aditya, Purnama Santosa, Diyono, Dany Laksono and Farida Annisa (Indonesia): I-SRI, an SDI Readiness Index for Local Government in Indonesia (7298)

TS04I – Accreditation and Quality Assurance in Professional Survey Education

Wednesday, 18 June 14:30–16:00
Venue: Room 305, KLCC
Commission: 2
Chair: Assoc. Prof. Sr Dr. **Juazer Rizal Abdul Hamid**, Malaysia
Rapporteur: Dr. **Behnam Alizadehashrafi**, Malaysia

Bela Markus (Hungary): Managing Curriculum Development and Enhancing Quality (7123)

Farah Aishah Alias (Malaysia): Geomatic Undergraduate Programme at the Universiti Teknologi Malaysia – Students and Alumni Perspectives (7189)

Purnama Budi Santosa, Trias Aditya, Heri Sutanta and Dany Puguh Laksono (Indonesia): Lessons-Learnt from the Use of Opensource GIS for Training of Disaster Contingency Planning in Indonesia (7135)

2014 FIG Director Generals Forum –Session 4

Wednesday, 18 June 16:30–18:00

Venue: Rooms 403 and 404, KLCC

Chair: Mr. **Robin McLaren**, FIG, United Kingdom

Rapporteur: Mr. **Jean du Plessis**, UN-Habitat/GLTN, Kenya

The Annual FIG Director Generals Forum brings together Chief Executives or Director Generals (or their representatives or nominees) of national (or provincial) agencies and FIG Affiliate Membership that has responsibility over mapping, cadastral, valuation, planning and development, land administration and management from around the world. 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. The Forum will also seek approaches to secure, support, sustain and safeguard land and property rights for all, draw upon appropriate experiences and good practices to further improved efficiency and better governance within the land sector. Enhancing effectiveness of land sector agencies is necessary at the onset of the Post-2015 Development Agenda.

- By invitation only

The 2014 FIG Director Generals Forum is supported by UN Habitat-GLTN

2014 FIG Academic Members Forum – Session 2

Wednesday, 18 June 16:30–18:00

Venue: Room 402, KLCC

Chair: Ms. **Liza Groenendijk**, Chair Elect of FIG Commission 2, Netherlands

- By invitation only

The 2014 FIG Academic Members Forum is supported by FAO

French Speaking Session 2

Wednesday, 18 June 16:30–18:00

Press Center, KLCC

Chair: Mr. **Marc Vanderschueren**, Belgium
Rapporteur: Mr. **Godelive Phanzu**, Democratic Republic of the Congo

François Mazuyer (France): Presentation of the project of coastal and maritime portal (7377)

Léopold Degbegnon (Benin): Problems of the Allotment in Republic of Benin and Approaches of Solutions (7378)

Godelive Phanzu (Democratic Republic of Congo): La Problématique de la Domanialisation des Terres en République Démocratique du Congo (7380)

Thierry Demathieu (Australia): Engager l'industrie Avec la Génération Future de Géomètres (7389)

Supported by UN-Habitat/GLTN

FIG Platinum Corporate Member Special Session: ESRI – National Mapping and Land Administration Solutions

Wednesday, 18 June 16:30–18:00

Venue: Room 305, KLCC

Chair: Mr. **Brent Jones**, Survey/Engineering Industry Manager, Esri

NEW feature: FIG Platinum Corporate members have been given the opportunity to compose a session in the technical programme of the congress.

- **National Mapping and Land Administration Solutions**
ArcGIS is a complete geospatial platform for land administration and national mapping organizations to efficiently collect, process, produce, manage and share a wide range of authoritative geospatial information products and services. This workshop will discuss the many existing and upcoming challenges in organizations today and will detail the capabilities of the complete platform solution.

Innovative Land Administration Systems. Well-Functioning Cadastral Systems – Examples from the Nordic Countries 2

Wednesday, 18 June 16:30–18:00

Venue: Room 306, KLCC

Chair: Mr. **Mikael Lilje**, Chair, FIG Commission 5
Rapporteur: Mr. **Pekka Halme**, President, Finnish Association of Geodetic and Land Surveyors

Torben Juulsager (Denmark): Free Geographic Basic Data – “a Driver for Growth and Efficiency Both in Private and Public Economy” (7267)

Arve Leiknes (Norway): Land Market and Boundaries (7430)

Henning Elmstroem (Denmark) and **Lars Jansson** (Sweden): Surveyors Qualification (7343)

2nd FIG Young Surveyors Conference

Wednesday, 18 June 16:30–18:00

Venue: Impiana Hotel

Commission: Young Surveyors Network

Chair: Ms. **Kate Fairlie**, Chair of FIG Young Surveyors Network, Australia

Rapporteur: Ms. **Paula Dijkstra**, Chair elect of FIG Young Surveyors Network, Netherlands

TS05A – Positioning and Measurement Special Technical Forum – Next Generation Positioning Infrastructure (PI)

Wednesday, 18 June 16:30–18:00

Venue: Plenary Hall, KLCC

Commission: 5

Chair: Mr. **Mikael Lilje**, Chair, FIG Commission 5, Sweden
Rapporteur: Mr. **Rob Sarib**, National Delegate, FIG Commission 5, Australia

This is an open forum. Invited presentations on topics such as alternatives to GNSS positioning.

Chris Rizos (Australia): Positioning Infrastructure New Generation

Joël van Cranenbroeck (Belgium): A Fad or the Future of Satellite Navigation and Positioning?

Suelynn Choy (Australia): The Role of National Mapping Organizations for PI Provision and Ensuring PNT Integrity

Dan Roman (USA): Australia's National Positioning Infrastructure

John Dawson (Australia): The Vulnerabilities of GNSS Position & Timing

Mr. **Larry Hothem** (USA)

TS05B – Laser Scanning Techniques and Applications 2

Wednesday, 18 June 16:30–18:00

Venue: Conference Hall 1, KLCC

Commission: 5 and 6

Chair: Sr Dr. **Wan Abd Aziz Wan Mohd Akib**, Malaysia
Rapporteur: Mr. **Anual Aziz**, Malaysia

Ephraim Friedli and **Pascal Theiler** (Switzerland): Documentation of Remote Archaeological Sites – a Comparison Between Long Range Laser Scanning and Uav-Based Photogrammetry (7081)

Murat Yakar and **Ali Ulvi** (Turkey): Using of Laser Scanning Technique to Culture Heritage: the Sample of Kizkalesi (7079)

Sebastien Varea (France): Largest Scan Project Ever Collected: Versailles Case Study (6965)

Mohd Azwan Abbas, Halim Setan, Zulkepli Majid (Malaysia), **Albert K. Chong** (Australia) and **Derek D. Lichti** (Canada): The Effect of Datum Constraints for Terrestrial Laser Scanners Self-Calibration (6909)
This is a peer reviewed paper.

Vladimir Seredovich and **Maxim Altyntsev** (Russia): The Feasibility Study of Automatic Extraction of Cracks in the Roadbed from Mobile Laser Scanning Data (7125)

Renoald Tang, Halim Setan and **Zulkepli Majid** (Malaysia): Hybrid Technique for Three-Dimensional Modeling from Close Range Laser Scanner's Point Clouds (6871)
This is a peer reviewed paper.

TS05C – Cadastre and Land Administration Models 2

Wednesday, 18 June 16:30–18:00
Venue: Conference Hall 2, KLCC
Commission: 7
Chair: Mr. **Kees de Zeeuw**, National Delegate, FIG Commission 7, Netherlands
Rapporteur: Ms. **Claire Galpin**, National Delegate, FIG Commission 7, France

Arif Cagdas Aydinoglu and **Halil Ibrahim Inan** (Turkey):
Developing Land Registry and Cadastre Base Data Model for Land Management Applications (7250)

Don Grant, Mark Dyer and **Anselm Haanen** (New Zealand):
A New Zealand Strategy for Cadastre 2034 (6845)
This is a peer reviewed paper.

Nur Amalina Zulkifli, Alias Abdul Rahman, Hasan Jamil, Chee Hua Teng (Malaysia) and **Peter van Oosterom** (Netherlands):
Development of a Prototype for the Assessment of the Malaysian LADM Country Profile (7063)

Tan Liat Choon, Looi Kam Seng and **Chan Keat Lim** (Malaysia).
Peter Laarakker, Yola Georgiadou and **Jaap Zevenbergen** (Netherlands):
Person, Parcel, Power. An Extended Model for Land Registration (7394)

TS05D – Cadastral and Land Administration Perspectives

Wednesday, 18 June 16:30–18:00
Venue: Conference Hall 3, KLCC
Commission: 7
Chair: Assoc. Prof. Dr. **Wan Mohd Naim Wan Mohd**, Malaysia
Rapporteur: Md. **Zaki bin Ad Wahid**, Malaysia

Ludmiła Pietrzak and **Andrzej Hopfer** (Poland):
Registration and Time Updating of Objects in Public Registers and Impacts of These Operations on Spatial Data Integration for the Needs of Creation of the Spatial Information Infrastructure and the Multi-Dimensional Real Estate Cadastre (6984)

Abbas Rajabifard, Mohsen Kalantari, Brian Marwick, Serene Ho and **Ian Williamson** (Australia):
Let's Talk About Land and Property Information in 3D: What Should The Future Look Like? (7048)

C. J. (Kees) de Zeeuw and **F. L. V. P. L. (Frank) Tierolff** (Netherlands):
Preparing Kadaster for the Future and Contribute to Sustainable Economic Development (7069)

Craig Sandy (Australia):
Shaping the Cadastral Infrastructure for a Digital Future (7170)

Stig Enemark (Denmark):
Land Administration Systems: Underpinning the Human Rights Perspective (7208)

Gerda Schennach (Austria):
Cadastre as Part of Society – Society as Part of Cadastre? (7344)

TS05F – Valuation

Wednesday, 18 June 16:30–18:00
Venue: Room 302, KLCC
Commission: 9
Chair: Sr **Adzman Shah Mohd Ariffin**, Malaysia
Rapporteur: Mr. **Rosninawati Ngah**, Malaysia

Mehmet Ertas (Turkey):
Using Bare Valuation Method in Valuation of Rural Area (6850)
This is a peer reviewed paper.

Hrvoje Tomić, Siniša Mastelić, Ivić and **Miodrag Roić** (Croatia):
Transparent Valuation as a Planning Support for Just Land Management System (LMS) (6891)
This is a peer reviewed paper.

Manohar Velpuri and **Anusha Pidugu** (Singapore):
City Biodiversity Index and Its Linkage to Real Estate Pricing (6956)
This is a peer reviewed paper.

Ezgi Candas and **Tahsin Yomralioglu** (Turkey):
The Land Valuation Issues In Turkey (7124)

Oyewole Mustapha Bello and **Awoamim Joseph Yacim** (Nigeria):
Impact of Tree Shade on Rental Value of Residential Property in Maiduguri, North-Eastern Nigeria (7171)

Dennis A. Webb (USA):
The Webb Chart: A Simple Fast Method for Valuing Fractional Interests (7249)

TS05G – Planning Policies and Environmental Improvement 1

Wednesday, 18 June 16:30–18:00
Venue: Room 303, KLCC
Commission: 8
Chair: Mr. **Kwame Tenadu**, Chair Elect, FIG Commission 8, Ghana
Rapporteur: Mr. **Wafula Nabutola**, Chair, FIG Commission 8, Kenya

Siti Aekbal Salleh and **Andy Chan** (Malaysia):
Land Surface Albedo Determination: Remote Sensing, Ground and Statistical Validation (6910)
This is a peer reviewed paper.

Nazirah Md. Tarmizi, Noorita Shahrman, Ismail Maarof and **Abd Manan Samad** (Malaysia):
A Concept of Urban Poverty Area Identification Using Spatial Correlation Studies on High Resolution Satellite Imagery (6843)

Hung Sek Leong (Malaysia):
Drying Area: An Empirical Study of the Missing Link in High-Rise Residential Buildings in Malaysia (6883)

Ridvan Ertugrul Yildirim, Ali Erdem Ozcelik, Ebru Colak, Recep Nisançi and **Aziz Sisman** (Turkey):
The Requirements Framework for Location of Urban Regeneration Areas: Case Study of Trabzon Industrial District in Turkey (6986)

Fatih Iscan (Turkey):
Analyses of the Results of Land Consolidation Studies by GIS (6989)

Commission Dinners

Wednesday, 18 June 20:00–23:00
Venue: To be announced

STDM Advisory Committee Meeting

Thursday, 19 June 07:00–08:30
Venue: Room 308, KLCC

- By invitation only

African Task Force Roundtable

Thursday, 19 June 08:00–09:00
Venue: Press Centre, KLCC
Chair: Ms. **Diane Dumashie**, Chair FIG African Task Force, United Kingdom

PS03 – Plenary Session 3

Thursday, 19 June 09:00–10:45
Venue: Plenary Hall, KLCC
Chair: Mr. **Robert Foster**, Honorary President FIG, NSPS, USA

General Focus:

The Profession has key roles towards the betterment of society, environment and economy and must continue its march to the top, towards professional significance and relevance.

- Mr. **Ben Elder**, IPMS Coalition, United Kingdom (Global Launch of the International Property Management Standards)
- Mr. **Jean-Yves Pirlot** President, Comité de Liaison des Géomètres Européens (CLGE), Belgium
- Mr. **Ahmad Fauzi Nordin**, Director General, Department of Survey and Mapping Malaysia

UN-Habitat/GLTN/Kadaster: Operationalisation of the Continuum of Land Rights and STDM Country Level Implementation

Thursday, 19 June 09:00–18:00
Venue: Room 410, KLCC

- A one day Workshop
- By invitation only

16th International Surveyors' Congress (16th ISC)

Thursday, 19 June 11:30–13:00
Venue: Plenary Hall, KLCC
Chair: Mr. Sr Hasan Jamil Deputy Director General II, Department of Survey and Mapping Malaysia

- Welcome Address: Mr. **Sr Hasan Jamil**, Deputy Director General II, Departm. of Survey and Mapping Malaysia
- Address: Mr. **Sr P. Tangga Peragasam**, RISM President
- Opening: Mr. **Cheehai Teo**, FIG President
- Keynote Address: Ms. **Louise Brooke-Smith**, RICS President Elect
- Keynote Address: Prof. **Jon Mills**, Treasurer of ISPRS

FAO/FIG Roundtable on VGGT and Valuation Standards

Thursday, 19 June 11:30–13:00
Venue: Rooms 403 and 404, KLCC
Chair: Ms. **Frances Plimmer**, Chair, FIG Commission 9

The Round Table will focus on the need for valuation, valuation standards and what needs to be standardised. There will be short scene-setting presentations by each of the invited Round Table members, open discussions and interactions coupled with reflection around the focus of the roundtable and how the surveying profession, in particular valuation professionals, can best leverage on the VGGT in assisting its global service and ethical standards.

2nd FIG Young Surveyors Conference

Thursday, 19 June 11:30–13:00
Venue: Impiana Hotel
Commission: Young Surveyors Network

Chair: Ms. **Kate Fairlie**, Chair of FIG Young Surveyors Network, Australia
Rapporteur: Ms. **Paula Dijkstra**, Chair elect of FIG Young Surveyors Network, Netherlands

UN Habitat-GLTN/FIG Joint Technical Session on Cost and Financing Land Administration Systems (CoFLAS)

Thursday, 19 June 11:30–13:00
Venue: Room 402, KLCC
Chair: Mr. **Tommy Österberg**, Lantmäteriet, Sweden
Rapporteur: Mr. **Solomon Haile**, Land and GLTN Unit, UN Habitat, Kenya

GLTN's CoFLAS initiative aims to provide a useful and practical tool whereby the costing and financing of land administration services in developing countries can be reformed, revitalized or updated to enabling the agencies involved in providing cost effective, efficient, sustainable and affordable services. There are significant economic and social benefits for ensuring an effective, efficient and inclusive land administration system. The initiative is being carried out in partnership with a number of GLTN Partners including Lantmateriet, Kadaster International and University of Twente.

TS06A – Joint FIG Commission 5/ UN-GGIM-AP Session on Global Geodetic Reference Frame and CORS 1

Thursday, 19 June 11:30–13:00
Venue: Conference Hall 1, KLCC
Commission: 5
Chair: Mr. **Mikael Lilje**, Chair, FIG Commission 5
Rapporteur: Mr. **Azhari bin Mohamed**, National Delegate, FIG Commission 5

Vanessa Lawrence (USA): Importance of Geodetic Infrastructure towards Realizing the Future We Want for All (7435)

John Dawson (Australia): Towards a UN resolution on Global Geodetic Reference Frame (7436)

Chris Rizos (Australia): The IGS in a Multi-GNSS World (6898)

Joao Torres (Portugal): The Contribution of the Regional Reference Frames to the Global Geodetic Reference Frame Implementation (7247)

TS06B – Maps and Map Production – New Ways Forward

Thursday, 19 June 11:30–13:00
Press Center, KLCC
Commission: 5
Chair: Sr Dr. **Abdullah Hisam Omar**, Malaysia
Rapporteur: Mr. **Anual Aziz**, Malaysia

Ravindra Sharma, Manish Sacklecha and Santosh Kumar Mahajan (India): Multiple Use of Laser Meter & Innovation Techniques in Engineering Surveys (6822)

Siti Aekbal Salleh, Eran Sadek Said Md. Sadek and Wan Mohd Naim Wan Mohd (Malaysia): The Panoramic VR Integration of Web-based GIS Residential Property Marketing Information System (WGPMIS) (6915)
This is a peer reviewed paper.

Rukhsana and Humayun Sarkar (India): Population Density Mapping Based on Build up Area using GeoEye Image and GIS Technique: Saltlake City, Kolkata (6831)

Theophilus Akinola, Felix Odeyemi and Peter Suru (Nigeria): Maps: an Essential Instrument in Tourism Industry Development (7268)

Frank Bignone (Japan): Automated Processing for 3D Mosaic Generation, a Change of Paradigm (7386)

TS06C – Global Cadastration
Thursday, 19 June 11:30–13:00
Venue: Conference Hall 2, KLCC
Commission: 7
Chair: Mr. **Keith Clifford Bell**, World Bank, United States
Rapporteur: Mr. **David Coleman**, President, GSDIA, Canada

Brent Jones (USA): New Technologies for Cadastral Systems (6998)

Robin McLaren (United Kingdom): Can the MapMyRights Initiative be a Game Changer? (7030)

Rizqi Abdulharis, Andri Hernandi, Asep Yusup Saptari and Alfita Puspa Handayani (Indonesia): Legal Aspect of Participatory Mapping on Formalisation of Right of Indigenous Community to Land in Indonesia (7280)

Bill Hirst (Australia): Cadastre 2034 – Australian Strategy for Cadastral Reform and Innovation (7391)

TS06D – Land Administration Country Case Study 3

Thursday, 19 June 11:30–13:00
Venue: Conference Hall 3, KLCC
Commission: 7
Chair: Sr **Wan Zainuddin bin Wan Yusoff**, Malaysia
Rapporteur: Sr Dr. **Tan Liat Choon**, Malaysia

Edward Kwesi, Peter Ekow Baffoe and **Kwame Tenadu** (Ghana):

Challenges of Land Acquisition the in the Mining Communities of Tarkwa, Ghana (6950)
This is a peer reviewed paper.

Sabahattin Akkus, Tayfun Cay and **Ismail Hakki Cicek** (Turkey):
Effects of Heritage Sharing Problems in Land Registry on the Rural Areas: Tarsus Yanikkişla and Kizilçukur Villages Sample (6849)

Safar Untong (Malaysia):
Development Of Multi-Purpose Cadastre in Sabah (6987)

Mazlan Hashim, Siew Wei Jaw and **Samsudin Ahmad** (Malaysia):
A Conceptual Framework for Underground Utility Mapping Accuracy Assessment Using Ground Penetrating Radar (6833)
This is a peer reviewed paper.

TS06E – Cadastral Template 2.0

Thursday, 19 June 11:30–13:00
Venue: Room 301, KLCC
Chair: Dr. **Christiaan Lemmen**, National Delegate, FIG Commission 7, Netherlands

Abbas Rajabifard (Australia), **Daniel Steudler** (Switzerland), **Mohsen Kalantari** and **Ali Aien** (Australia):

The Cadastral Template 2.0, From Design to Implementation (7046)

Daniel Steudler and **Abbas Rajabifard** (Australia):
Renewal of the Cadastral Template with Web 2.0 Technology (7130)

TS06F – Valuation & Technology

Thursday, 19 June 11:30–13:00
Venue: Room 302, KLCC
Commission: 9
Chair: Prof. f Sr Dr. **Ting Kien Hwa**, Malaysia
Rapporteur: Mr. **Khuzaimah Abdullah**, Malaysia

Maximilian Karl (Germany):
Official Committees of Valuation Experts and Taxation in Germany (7243)

Mehmet Alkan and **Ferihan Ozfidan** (Turkey):
Design of Real Estate Valuation Information System and Implementation: An Example of Yenişehir, Mersin, Turkey (6975)

Sonali Ghosh and **Arunava Dey** (India):
GIS Equipped Geovisualization for Investment in Real Estate: Visualising the Reality with the Notion of Economy (7194)

Jie Sun and **Haicong Yu** (China, PR):
Improvement of Real Estate Appraisal Sales Comparison Approach Based on Cluster Analysis and Hierarchical Analysis (7059)

Sebastian Zaddach and **Hamza Alkhatib** (Germany):
Propagating the Uncertainty of the Market Value by the Use of a Bayesian Regression Approach (7073)

Mohammed Abdur Razzak (Bangladesh):
Property Value Information Systems (PVIS) : A Glocal Perspective (7198)

TS06G – Planning Policies and Environmental Improvement 2

Thursday, 19 June 11:30–13:00
Venue: Room 303, KLCC
Commission: 8
Chair: Sr **Mohammad Zaki bin Mohd Ghazali**, Malaysia
Rapporteur: Mr. **Chengxi Bernad Siew**, Malaysia

Xavier Prigent (France):
Contractualisation of Environmental Law (7382)

Hepi Handayani (Indonesia):
Study for Comparative Analysis of Changes in Shore Line Using Multi Stage Satellite Images (Case Study: Gresik and Bangkalan, Indonesia) (7392)

Ismail Dursun, Abdurrahman Geymen and **Omer Faruk Inan** (Turkey):
Management of Farmers' and Farmland Information: A Case Study in Turkey (7266)

Komu Felician (Tanzania):
Urban Land Grabbing and its Implications to Urban Development (7055)

TS06H – Geospatial Data Processing 1

Thursday, 19 June 11:30–13:00
Venue: Room 304, KLCC
Commission: 3
Chair: Sr Dr. **Zainal Abdul Majeed**, Malaysia
Rapporteur: Sr **Azlim Khan Abdul Raof Khan**, Malaysia

Tarik el Maftouhi and **El Kharim Youness** (Morocco):
Inventory and Monitoring the Evolution of the Quarrying Exploitation in the Region Tangiers-Tetouan (Morocco) in Order to Design a GIS Tool for the Management of Useful Geomaterials (6867)

Martin Salzmann and **Dorine Burmanje** (Netherlands):
Societal Drivers in the Geospatial Arena (6892)

Daniel Chukwuemeka Onukaogu and **Njike Chigbu** (Nigeria):
Spatial Information Technology – “a Virile Tool and Fit-For-Purpose in Good Governance Campaign in the Sub-Saharan Africa-A Focus on Nigeria” (7015)

Hayri Hakan Denli, Dursun Zafer Seker and **Sinasi Kaya** (Turkey):
GIS Based Carbon Dioxide Concentration Research in ITU Campus, Istanbul, Turkey (7080)

TS06I – The Surveying Profession Across the World – Current Actions and Issues

Thursday, 19 June 11:30–13:00
Venue: Room 305, KLCC
Commission: 1
Chair: Mr. **Brian Coutts**, Chair Elect, FIG Commission 1, New Zealand
Rapporteur: Ms. **Winnie Shiu**, National Delegate, FIG Commission 1, Hong Kong SAR, China

Habtemicael Weldegiorgis

(Eritrea):
The Eritrean Notary Public in the Context of Global Notaries System (6764)
This is a peer reviewed paper.

Nor Ashikin Mohamed Yusof and Mohd Yunus Mohd Yusoff

(Malaysia):
Level of Readiness of Malaysian Surveying Professionals in Facing Liberalization (6818)
This is a peer reviewed paper.

Anthony Ilufoye Awoniyi

(Nigeria):
Surveying and Geoinformatics Training in Nigeria: Issues and Challenges (7001)

Matthew N. Ono and Chukwubeze U. Onwuzuligbo

(Nigeria):
GNSS Integration into Cadastral Surveying and Surveyors' Practices in Anambra State, Nigeria (7276)

TS06J – Hydrography in Action 1

Thursday, 19 June 11:30–13:00
Venue: Room 306, KLCC
Commission: 4
Chair: Mr. **Michael Sutherland**, Chair, FIG Commission 4, Trinidad & Tobago
Rapporteur: Ms. **Angela Etuonovbe**, Chair Elect, FIG Commission 4, Nigeria

Enrico Paringit, Louie Balicanta and Czar Jakiri Sarmiento

(Philippines):
Survey Requirements for River Flood Assessment and Spatial Planning: Experiences from LiDAR and River Hydrographic Measurements in the Philippines (6785)
This is a peer reviewed paper.

Dino Dragun, Ana Gavran and Car Vedran

(Croatia):
Hydrographic Survey of the River Drava Branches in the Process of Revitalization, Flood Control and Morphological Monitoring (6869)
This is a peer reviewed paper.

Ekrem Saralioglu and Bayram Uzun

(Turkey):
Determining Practically Temporal Coastline Changing in Trabzon (6933)

Annette Scheider, Harry Wirth, Marc Breitenfeld and Volker Schwieger

(Germany):
HydrOs – An Integrated Hydrographic Positioning System for Surveying Vessels (7094)

Andrew Waddington

(United Kingdom):
A Cost-Benefit Analysis for the Application of a Multi-Sensor Approach to Near Shore Hydrography (7026)

Special Session on the Implementation of VGGT

Thursday, 19 June 14:30–16:00
Venue: Room 402, KLCC
Chair: Mr. **Robin McLaren**, National Delegate, FIG Commission 3

The global community has endorsed the Voluntary Guidelines, the UN General Assembly has twice encouraged member countries to implement the VGGT and several international organizations have formally taken the VGGT on board. Similarly, FIG embraces the VGGT and thus its membership has a responsibility to support its implementation. This special session will be a dynamic and interactive session where the facilitator and the audience will engage, question and interact with invited panellist on the implementation of the VGGT by FIG's global professional community.

This is a FAO/FIG joint Session

FIG Platinum Corporate Member Special Session: Trimble

Thursday, 19 June 14:30–16:00
Venue: Rooms 403 and 404, KLCC

NEW feature: FIG Platinum Corporate members have been given the opportunity to compose a session in the technical programme of the congress.

Cadastré 2014 – From Vision to Practice and Beyond 1

Thursday, 19 June 14:30–16:00
Venue: Room 401, KLCC
Commission: 7
Chair: Mr. **Daniel Roberge**, Chair, FIG Commission 7, Canada
Rapporteur: Mr. **Rohan Bennett**, Netherlands

Paul van der Molen (Netherlands):
'Cadastré 2014': a Beacon in Turbulent Times (7119)

Jürg Kaufmann (Switzerland):
Review and Impact of the Six Statements of 'Cadastré 2014' (7141)

Daniel Steudler (Switzerland):
Developments out of 'Cadastré 2014' Internationally and in Switzerland in Particular (7129)

Gavin Adlington (United Kingdom):
Case Studies from Newly Renovated Land Administration Systems in the Emerging Economies (7413)

Bong-Bae Jang (Republic of Korea):
The Completion of the Cadastré 2014 through a Case Study on the South Korea (7187)

Christiaan Lemmen (Netherlands):
LADM and its Role in Establishing Cadastral Systems (7307)

Michael Germann (Switzerland):
An Implementation Tool for LADM (7415)

TS07A – Joint FIG Commission 5/ UN-GGIM-AP Session on Global Geodetic Reference Frame and CORS 2

Thursday, 19 June 14:30–16:00
Venue: Plenary Hall, KLCC
Commission: 5
Chair: Dr. **John Dawson**, UN-GGIM-AP, Australia
Rapporteur: Mr. **Graeme Blick**, National Delegate, FIG Commission 5, New Zealand

Graeme Blick and Matt Amos (New Zealand):
A new Geodetic Strategic Direction for New Zealand (7033)

Arisauna Pahlevi and Dyah Pangastuti (Indonesia):
Indonesian Geospatial Reference System 2013 and Its Implementation of Positioning (6894)

Lautaro Rivas and Julio Neira (Chile):
New Chilean Reference Frame: Three Years After the Maule Earthquake (6829)

Nic Donnelly (New Zealand), **Gavin Evans, Roger Fraser, Joel Haasdyk and John Dawson** (Australia):
Progress Towards a New Geodetic Datum for Australia (7323)

Matt Higgins, Linda Morgan, Chris Rizos, Rob Sarib, Scott Strong, Steve Turner and Richard Stanaway (Australia):
Deformation Modelling to support the Papua New Guinea Geodetic Datum 1994 (PNG94) (7044)

Christina Kempe, Linda Alm, Fredrik Dahlström, Lars E. Engberg and Jakob Jansson (Sweden):
On the Transition to the New Swedish Height System RH 2000 (6994)

TS07B – Standards and Recommended Practices for Positioning and Measurement

Thursday, 19 June 14:30–16:00
Venue: Conference Hall 1, KLCC
Commission: 5
Chair: Mr. **Mr Larry Hothem**, AAGS, United States
Rapporteur: Mr. **Sr Hazri Hassan**, Malaysia

David Martin (France):
An Introduction to 'The Guide to the Expression of Uncertainty in Measurement' (7087)

Anders Alfredsson, Johan Sunna and Clas-Goran Persson (Sweden):
HMK – Swedish Handbook in Surveying and Mapping (7072)

Joseph Odumosu, Funmilola Idowu and Chika Okorochoa (Nigeria):
Selecting Optimal Data-Fitting Model for Surveying and Geodetic Applications (7132)

Kamaludin Omar, Azhari Mohamed and Jespall Gill (Malaysia):
A Review on Legal Traceability of Global Positioning System (GPS) Measurements in the Malaysian Cadastral Practice (7067)

Carlos Aurélio Nadal, Pedro Luis Faggion and Leonardo Ribas Précoma (Brazil):
Development of Mechanical Accessory for Quality Control in Industrial Topographic Survey (7112)

TS07C – Land Governance 1

Thursday, 19 June 14:30–16:00
Venue: Conference Hall 2, KLCC
Commission: 7
Chair: Mr. **Richard Grover**, National Delegate, FIG Commission 7
Rapporteur: Dr. **Donald Grant**, Australia

Claire Galpin (France):
Improving Land Governance in the Senegal Valley: Context, Issues and Challenges (6964)

Dimo Todorovski and **Paul van der Molen** (Netherlands):
Post-Conflict Land Administration as Facilitator of the Post-Conflict State Building; Case Cambodia (6996)

Tommy Osterberg (Sweden):
The Importance of Cadastral Organisations for Cadastral Development (7086)

Rosy Liao (China, PR):
Organizational Evolution of Land Administration in China since Its Opening-up in 1978: Social-Economic Rationale and Technical Advancement (7222)

Samsudin Salfarina (United Kingdom):
Decentralisation and Good Governance in Land Administration Systems (7289)

Alexander Kohli (Switzerland):
Transparent Land Governance: Temporary Development Zones to meet the Requirements of Urban Expansion (6947)

TS07D – State Land Management

Thursday, 19 June 14:30–16:00
Venue: Conference Hall 3, KLCC
Commission: 7
Chair: Prof. Sr Dr. **Shattri Mansor**, Malaysia
Rapporteur: Sr **Ali bin Ahmad**, Malaysia

Yasar Selcuk Erbas, **Recep Nisanci**, **Ali Erdem Ozelik** and **Tahsin Yomralioglu** (Turkey):
The Requirements of Marine Cadastre in Turkey (6930)

Andri Hernandi, **Rizqi Abdulharis**, **Sadikin Hendriatiningsih** and **Asep Yusuf Saptari** (Indonesia):
Exploring the Possibility of Developing Multipurpose Marine Cadastre in Indonesia (7199)

He Huanle (China, PR):
China's Land Registration – Situation, Challenges and Efforts (7227)

Jonathan Haupt (USA):
Case Study: Minnesota Department of Natural Resources; an Investment in the Administration of State Lands (7262)

Melkamu Moges (Ethiopia):
How Much Does 'Privatization of Land' Mean for Developing a Cadastral System? (6805)

David Chang (Fiji):
Fiji Mahogany Survey (6859)

TS07E – Deformation Monitoring 1

Thursday, 19 June 14:30–16:00
Venue: Room 301, KLCC
Commission: 6
Chair: Prof. Sr Dr. **Halim Setan**, Malaysia
Rapporteur: Assoc. Prof. Dr. **Biswajeet Pradhan**, Malaysia

Michael Álvarez González and **Lamberto Alvarez Gil** (Cuba):
Historical Accumulated Index of Deformation (HAID) for the Study of Earth Dams (6782)

Vassilis Gikas, **Phaedon Karydakis**, **Thanassis Mpimis**, **George Piniotis** and **Harris Perakis** (Greece):
Nondestructive Load Testing of a Single-Span, Cable-Stayed Bridge: Testing Design, Instrumentation and Preliminary Results (7331)

YI Xiaodong (China, PR):
Deformation Analysis Using L-estimates Method (7283)

Spencer Garry and **Mark Bell** (Australia):
Static and Dynamic Monitoring of Civil Engineering Structures by Microwave Interferometry (7282)

Joel Van Cranenbroeck (Belgium):
Introducing Geo-Sensing as the integration of Geodetic and Geotechnical Deformation Monitoring Techniques to Contribute on Deformation Modelling (7337)

TS07F – Property Taxation & Technology

Thursday, 19 June 14:30–16:00
Venue: Room 302, KLCC
Commission: 9
Chair: Mr. **Liao Junping**, Chair Elect, FIG Commission 9, China, PR
Rapporteur: Mr. **Sebastian Kropp**, Germany

Ran Zhang (China, PR):
Application Research of Adaptive Estimation Procedure (AEP) in Mass Appraisal of the Real Estate Tax Base (6798)
This is a peer reviewed paper.

Yan Li and **Mengting Wang** (China, PR):
The Unity Valuation Approach in Mass Appraisal of Real Properties: a Case Study for Shenzhen (6799)
This is a peer reviewed paper.

Gyneth Magiri and **Geoffrey Cheruiyot** (Kenya):
Geographical Information System Based Valuation Roll for Optimal Land Taxation in Nairobi City County (6800)
This is a peer reviewed paper.

Norhaya Kamarudin and **Dzurllkanian Daud** (Malaysia):
Computer Assisted Mass Appraisal (CAMA) Application for Property Tax Administration Improvement in Malaysia (6855)
This is a peer reviewed paper.

TS07G – Disaster and Environmental Management – Joint FIG Commission 3 and 8 / ASEAN Flag Session

Thursday, 19 June 14:30–16:00
Venue: Room 303, KLCC
Commission: 3, 8 and ASEAN Flag
Chair: Mr. **Pengiran Matusin Matasan**, President of ASEAN Flag
Rapporteur: Mr. **Kwame Tenadu**, Chair Elect, FIG Commission 8, Ghana

Mina Amharref, **Abdes-same Bernoussi**, **Mustapha Ouardouz** and **Laila Knitar** (Morocco):
Vulnerability and Risk Assessment for Groundwater Pollution: Application to Oulad Oghbane Aquifer, (Morocco) (6958)

Lalitya Narieswari, **Sri Lestari Munajati** and **Mone Iye C Marschiavelli** (Indonesia):
Disaster Risk Maps for Gender Empowerment in Disaster Management (6982)

Azar Zafari (Netherlands), **Fatemeh Khamespanah** and **Milad Moradi** (Iran):
Seismic Vulnerability Classification of Urban Areas Using the Integration of Granular Computing and Induced Ordered Weighted Averaging (6772)

Kibrom Hailu Tafere and **Daniel Alemayehu Demissie** (Ethiopia):
Malaria Risk Assessment Using GIS a Case Study of Adama District, Ethiopia (6827)

Enrico Rispoli (Italy):
Processing of Spatial Information and Land Data for Compatible Development and Disaster Prevention (7349)

TS07H – Geospatial Data Processing 2

Thursday, 19 June 14:30–16:00
Venue: Room 304, KLCC
Commission: 3
Chair: Sr **Mohamad Yunus Md Yusof**, Malaysia
Rapporteur: Sr **Zoher Normanbhoy**, Malaysia

Esin Bitik, **Dursun Zafer Seker** and **Hakan Denli** (Turkey):
Topological Errors From CAD to GIS (7102)

Ralf Schroth (Germany):
Aeronautical Data Quality – A New Challenge for Surveyors (7122)

Ukeame Emmanuel Ajie and **Amina Dienne** (Nigeria):
Spatial Data Analysis of Solid Waste Management System in Port Harcourt Metropolis After 100 Years of Its Existence (7163)

Kayode Odedare and **Adedayo Alagbe** (Nigeria):
Geographic Information System as a Decision Support System for Tourism Management in a Developing Economy: a Case of Abuja, Nigeria (7201)

Elif Sertel and **Dursun Seker** (Turkey):
Modeling Spatial Changes in Suburban Areas of Istanbul Using Landsat 5 TM Data (7206)

TS07I – Developing Our Profession – Examples from Across the World of Successful Training and Professional Development

Thursday, 19 June 14:30–16:00
Venue: Room 305, KLCC
Commission: 1, 2
Chair: Sr **Shahabuddin Ibrahim**, Malaysia
Rapporteur: Sr **Yeo Suan Imm**, Malaysia

Adama Sarr (Senegal):
Surveying and New Technologies for Sustainable Development (6881)

John Minehan (Australia):
ISNSW Cadastral Workshops: 2006 to 2014 and Beyond (7116)

Jennifer Eziaku Chigbu (Nigeria):
Closing the Gap and Harnessing Opportunities in Life Long Learning: an Initiative for Curbing the Vulnerable Youth in Nigeria (7200)

Leonie Newnham (Australia):
Social Media and the Professional – How to Decide Which Tool to Use! (7409)

Dian Permana Sari, Firman Ariefiansyah Singagerda, Esti Prajoko and Catur Kuat Purnomo (Indonesia):
Application of Importance Performance Analysis Method to Improve the Quality of Services in Land Office (7134)

TS07J – Hydrography in Action 2

Thursday, 19 June 14:30–16:00
Venue: Room 306, KLCC
Commission: 4
Chair: Sr **Razali Ahmad**, Malaysia
Rapporteur: Sr **Zahari Zamlope**, Malaysia

M.D.E.K. Gunathilaka (Sri Lanka) and **Mohd Razali Mahmud** (Malaysia):
Ceaseless Tidal Zoning for Straits of Malacca Using Spatial Interpolation (6921)
This is a peer reviewed paper.

Almin Dapo, Bosko Pribicevic and Branko Kordic (Croatia):
Hydrographic Control Measurements of Sediment in the Accumulation Basin of the HPP Salakovac Using Multibeam Echo-sounder (7233)

Alain De Wulf, Philippe De Maeyer, Annelies Incoul, Timothy Nuttens and Cornelis Stal (Belgium):
Feasibility Study of the Use of Bathymetric Surface Modelling Techniques for Intertidal Zones of Beaches (7092)

Almin Dapo, Bosko Pribicevic and Emanuel Bulic (Croatia):
Hydrographic Survey of the River Bed Bosut with Subbottom Profiler to Determine the Thickness of Sedimentary Deposits (7237)

TS07K – Construction Management, Sustainable Development

Thursday, 19 June 14:30–16:00
Press Center, KLCC
Commission: 10

K. H. Chan (Hong Kong SAR, China):
Assessing the Effectiveness of Temporary Works for Hong Kong Construction (6954)
This is a peer reviewed paper.

Catherine Kariuki, Nicky Nzioki and Jennifer Murigu (Kenya):
Sustainable Real Estate Development in Kenya: an Empirical Investigation (7256)

Grace Muiruri and Cornelius Mulinge (Kenya):
Health and Safety Management on Construction Project Sites in Kenya (6847)

Siti Nurhuda Binti Abd Wahid, Saiful Azri Bin Abu Hasan Sazalli and Zubaidah Binti Ramli (Malaysia):
Developing Sustainable Procurement Framework for Malaysia Public Construction Procurement (7047)

Zelalem Yirga Adamu (USA):
Critical Analysis of Ethiopian Urban Land Lease Policy Reform Since Early 1990s (6825)
This is a peer reviewed paper.

Solomon Keffa (Ethiopia):
Integrated Housing Development as Instrument to Alleviate Urban Poverty (the Case of Addis Ababa) (7359)

Jayant Supe and Mohan Kumar Gupta (India):
Compressive Strength of Green Building Concrete (6830)

UN Habitat-GLTN/FIG Joint Technical Session on the Surveying Profession and Grassroots-led Initiatives

Thursday, 19 June 16:30–18:00
Venue: Rooms 403 and 404, KLCC
Facilitated by: **Jean du Plessis**, UN-Habitat/GLTN, Kenya

This session hopes to discuss and redefine the role of surveying professionals vis-à-vis grassroots-led initiatives amongst the poor and vulnerable communities thereby emphasizing their role in changing the mindset that surveying services is only available to the elite. The session is to be interactive, co-organized by FIG and GLTN in partnership with civil society organizations from Slum Dwellers International, International Land Coalition and Huairou Commission. The hope is to highlight the value of engaging one-another to promote better mutual appreciation and clarifying the catalytic and supporting role the Profession can play in land policy agenda and advocacy to policy makers to ensure comprehension of the grassroots.

2014 FIG Corporate Members Meeting

Thursday, 19 June 16:30–18:00
Venue: Room 402, KLCC
Chair: Mr. **CheeHai Teo**, FIG President, Malaysia

The 2014 FIG Corporate Members Meeting is where the corporate membership within FIG meets the FIG Administration to exchange information, provide feedbacks and discuss on-going and proposed activities.

- By invitation only

Cadastre 2014 – From Vision to Practice and Beyond 2

Thursday, 19 June 16:30–18:00
Venue: Room 401, KLCC
Chair: Mr. **Paul van der Molen**, FIG Delegate of Commission 2
Rapporteur: Dr. **Christiaan Lemmen**, National Delegate, FIG Commission 7

Juerg H. Luethy (Switzerland):
Geocentraleapps – an Integration Platform for a Spatially Enabled Society (7031)

Abbas Rajabifard (Australia):
Cadastre 2014, in Relation to Spatial Data Infrastructure (SDI) (7412)

Rohan Bennett and Peter Laarakker (Netherlands):
Cadastre 2014: What Lies Beyond? (7414)

Stig Enemark (Denmark):
From Cadastre to Land Governance: a Cadastre 2014 Outlook (7213)

2nd FIG Young Surveyors Conference

Thursday, 19 June 16:30–18:00
Venue: Impiana Hotel
Commission: Young Surveyors Network
Chair: Ms. **Kate Fairlie**, Chair of FIG Young Surveyors Network, Australia
Rapporteur: Ms. **Paula Dijkstra**, Chair Elect of FIG Young Surveyors Network, Netherlands

TS08A – Joint FIG Commission 5/ UN-GGIM-AP Session on Global Geodetic Reference Frame and CORS 3

Thursday, 19 June 16:30–18:00
Venue: Plenary Hall, KLCC
Commission: 5
Chair: Dr. **Hungkyu Lee**
Rapporteur: UN-GGIM

Paula Gentle (New Zealand):
New Zealand's National CORS Network (7035)

Mikael Lilje, Peter Wiklund and Gunnar Hedling (Sweden):
The Use of GNSS in Sweden and the National CORS Network SWE-POS (7019)

Arif Aditiya, Joni Efendi and Mohammad Arief Syafii (Indonesia):
InaCORS: Infrastructure of GNSS CORS in Indonesia (6853)

John Ritchie (New Zealand):
On-Going Need for Local Survey Control Networks? (7190)

Graeme Blick (New Zealand):
Reference Frames in Practice – Manual (7431)

TS08B – Remote Sensing / Imagery Analysis and Modelling 1

Thursday, 19 June 16:30–18:00
Venue: Conference Hall 1, KLCC
Commission: 5

Chair: Sr **John Elvis**, Malaysia
Rapporteur: Mr. **Mohamed Sofian Abu Talib**, Malaysia

Godwill Tamunobiekiri Pepple (Nigeria):

Temporal Deforestation Assessment Survey of Wetlands in Port Harcourt City Local Government Area, Rivers State, Nigeria (6780)
This is a peer reviewed paper.

Styliani Verykokou and Babis Ioannidis (Greece):

3D Visualization Through Planar Pattern Based Augmented Reality (6814)
This is a peer reviewed paper.

Zulkiflee Abd Latif and Nur Hidayah Ibrahim (Malaysia):

Tree Species Identification Using High Resolution Remotely-Sensed Data (6935)

Pascal Sirguey and Nicolas J. Cullen (New Zealand):

A Century of Photogrammetry on Kilimanjaro (6959)

Naveen Kariyawasam, Simitkumar Raval and Ali Shamsoddini (Australia):

Incorporating Remote Sensing as a Tool to Assist Rehabilitation Monitoring in a Dolomite Mining Operation in South Australia (6966)

This is a peer reviewed paper.

TS08C – Earth Geodynamics and Monitoring 1

Commission: 5 and 6
Thursday, 19 June 16:30–18:00
Venue: Conference Hall 2, KLCC

Chair: Mr. **Azhari bin Mohamed**, Malaysia
Rapporteur: Sr **Engku Mohd Adlin Engku Habib**, Malaysia

Chong Luh Lau, Halim Setan, Zulkepli Majid (Malaysia), **Albert Chong** (Australia) and **Mimi Diana Ghazali** (Malaysia):

Investigation of the Optimal Resolution for Landslide Monitoring Using Terrestrial Laser Scanner (7052)

Biswajeet Pradhan and Omar F. Alahwaynee (Malaysia):

Ensemble of Data-Driven EBF Model with Knowledge Based AHP Model for Slope Failure Assessment in GIS Using Cluster Pattern Inventory (6811)

This is a peer reviewed paper.

Khamarrul Razak, Rozaimi Che Hasan, Mohd Azwan Abbas, Lau Chong Luh and Zulkepli Majid (Malaysia):

Topographic Laser Scanning of Landslide Geomorphology System: Some Practical and Critical Issues (6939)

Lim Chor Sheng, Rabieahtul Abu Bakar, Suhaimi Jamaludin, Wan Abdul Aziz Wan Mohd Akib, Haluk Ozener and Bahadir Aktug (Turkey):

Geodetic Measurements for Earthquake Studies in Turkey

This is a peer reviewed paper.

TS08D – Land Administration Country Case Study 2

Thursday, 19 June 16:30–18:00
Venue: Conference Hall 3, KLCC
Commission: 7

Chair: Mr. **Daniel Roberge**, Chair, FIG Commission 7, Canada
Rapporteur: Dr. **Kristin Land**, National Delegate, FIG Commission 7, Sweden

Megha Datta, Bhanu Rekha Maturi, Arup Dasgupta and Anamika Das (India):

Land Administration: Two Speed World – A Study (7403)

Marija Juric and Kristin Land (Sweden):

Securing Land Rights for Broadband – Land Acquisition for Utilities in Sweden (6997)

Thomas Dabiri (Nigeria):

The Relevance of Cadastre Working Tools and its Engagement for Land Administration Challenges in Delta State of Nigeria (7004)

Murat Meha (Kosovo), **Joep Crompvoets** (Belgium) and **Muzafer Çaka** (Kosovo):

The Impact of Buildings and Apartments Registration in Economic Development of Kosovo (7084)

Lennart Johansson and Per Sörbom (Sweden):

Support to Implementation of Multipurpose Cadastral Information system in Vietnam (7346)

TS08E – Deformation Monitoring 2

Thursday, 19 June 16:30–18:00
Venue: Room 301, KLCC
Commission: 6

Chair: Mr. **Ivo Milev**, Chair Elect, FIG Commission 6, Germany
Rapporteur: Mr. **Allison Kealy**, Australia

Yaming Xu, Jianguo Zhou and Peng Zhang (China, PR):

Dynamic Deformation Monitoring Based on Wireless Sensor Networks (6973)

Gethin Wyn Roberts (China, PR), **Chris Brown** (United Kingdom), **Xu Tang** (China, PR) and **Oluropo Ogundipe** (United Kingdom):

The Use of GNSS to Aid the Structural Health Monitoring of the Seven Suspension Bridge's Suspension Cables and Support Towers (7188)

Mengchan Lim and Halim Setan (Malaysia):

A Practical Deformation Monitoring Procedure and Software System for Cors Coordinate Monitoring (6838)

This is a peer reviewed paper.

TS08F – Public-Private Partnerships in Planning and Land Development 1

Thursday, 19 June 16:30–18:00
Venue: Room 302, KLCC
Commission: 8 and 9

Chair: Ms. **Frances Plimmer**, Chair, FIG Commission 9, United Kingdom
Rapporteur: Mr. **Wafala Nabutola**, Chair, FIG Commission 8, Kenya

Wan Nor Azriyati Wan Abd Aziz, Zairul Nisham Musa, Noor Rosly Hanif, Ainoriza Mohd Aini and Abdul Ghani Sarip (Malaysia):

Vertical Living Phenomenon in Malaysia (7383)

Ziya Usta, Ekrem Saralioglu and Ebru Colak (Turkey):

Urban Renewal Activities in Turkey: The Trabzon Experience (6932)

Erwin Van der Krabben (Netherlands):

Private-Private Cooperation in Urban Regeneration Projects (7056)

Edward S. H. Au (Hong Kong SAR, China):

Urban Renewal – a Case Study in Hong Kong (7062)

Chan K (Hong Kong SAR, China):

Determining Factors in Enhancing a Shopping Arcade's Value upon Renovation (7136)

Nihat Enver Ulger (Turkey):

A Model for Sustainable Urban Regeneration in Turkey (7139)

TS08H – Geospatial Data Processing 3

Thursday, 19 June 16:30–18:00
Venue: Room 304, KLCC
Commission: 3
Chair: Assoc. Prof. Sr **Mohamad Nor Said**, Malaysia
Rapporteur: Sr **Mohd Latif Zainal**, Malaysia

Arnulf Christl (Germany):
OSGeo – Professionally Leveraging Open Source (7371)

Mulyanto Darmawan Darmawan, Heri Sutanta and Adi Rusmanto (Indonesia):
Developing Local Government Capacity for SDI Development in Indonesia (7288)

Muhammad Zumo Isa and Ahmad Vokna Saidu (Nigeria):
Identification of Suitable Site for Solid Waste Disposal in Yola, Nigeria Using GIS Method (6846)

Bulent Bostanci and Abdurrahman Geymen (Turkey):
Modelling of Road Traffic Noise (7082)

TS08I – The Changing Role of the Surveying Professional

Thursday, 19 June 16:30–18:00
Venue: Room 305, KLCC
Commission: 1
Chair: Mr. **Dr Nor Ashikin Mohamed Yusof**, Malaysia
Rapporteur: Mr. **Jamilah Ibrahim**, Malaysia

Leonie Newnham (Australia):
The Changing Role of the Surveying /Spatial Industries Professional – Looking towards 2040 (7408)

Paul Kenny (Australia):
Challenges and Relevance? (6762)
This is a peer reviewed paper.

Martin Karlen and Peter Dutschler (Switzerland):
Smart Verification of Geodata, with Open Source Approach (6943)

Coutts Brian J (New Zealand):
The Profession of Surveying: Where Do We Stand? (7038)

TS08J – Hydrography Issues

Thursday, 19 June 16:30–18:00
Venue: Room 306, KLCC
Commission: 4
Chair: Mr. **Gordon Johnston**, National Delegate, FIG Commission 4, United Kingdom
Rapporteur: Mr. **Michael Sutherland**, Chair, FIG Commission 4, Trinidad & Tobago

Mustafa Iptes (Monaco):
Hydrographic Education, Training and Professional Development (7154)

Rusli Othman, Kamaludin Mohd Omar, Ahmad Shahlan Mardi and Usmuni Din (Malaysia):
Hydrographic Education and Training at Universiti Teknologi Malaysia (7234)

Angela Etuionovbe (Nigeria):
Hydrography in Africa: Issues, Problems and Prospect (7157)

Markéta Pokorná and Annette Hadler (Germany):
Hydrography at the HafenCity University in Hamburg (7398)

TS08K – Building Information Modelling

Thursday, 19 June 16:30–18:00
Venue: KLCC
Commission: 10
Chair: Mr. **Kwan Hock Hai**, National Delegate, Commission 10, Malaysia
Rapporteur: Sr **Lee Choon Bin**, Malaysia

Christian Clemen, Robert Ehrich and Chris van Zyl (Germany):
Building Information Model (BIM) and Measuring Techniques (6880)

Jim Mason (United Kingdom):
BIM and the Law – the Legal Obstacles to BIM Adoption (7355)

Andrzej Borkowski, Grzegorz Jozkow, Marcin Ziaja and Kazimierz Becek (Poland):
Accuracy of 3D Building Models Created Using Terrestrial and Airborne Laser Scanning Data (7003)

Shazmin Aniza Abdul Shukor (Malaysia) and **Emma Rushforth** (United Kingdom):
Towards 3D As-Built – What Say the Professionals? (7192)

Olufemi Oyedele (Nigeria):
Infrastructure Provision in Developing Nations: Value for Money Approach (6778)

Catherine Mutava (Kenya):
Impact of Public Procurement Procedures on Delivery of Maintenance Works (6835)

Gala Dinner

Thursday, 19 June 19:30–23:30
Venue: Grand Ballroom, Mandarin Oriental Hotel

The Gala Dinner brings together the FIG community to celebrate the 25th Anniversary as well as to reflect, mingle, network and unwind. The dinner will include a 10-course Set Menu and Mocktail Drinks. During the dinner, guests will be entertained by a local cultural group and a live band performance. The cultural performance will showcase Malaysian traditional dances and musics. The band is well distinguished by its vocal abilities with an original sound of live musics

- Ticket is required

FIG Foundation Board Meeting

Friday, 20 June 07:00–09:00
Venue: KLCC
Chair: Mr. **John Hohol**, President, FIG Foundation

PS04 – Plenary Session 4

Friday, 20 June 09:00–10:45
Venue: Plenary Hall, KLCC
Chair: Mr. **Mohamad Azmi Mohd Zin**, President AALSM, Malaysia

General Focus:

On the horizon is the Post-2015 Development Agenda, the successor to the Millennium Development Goals. The session will consider Professional responsibilities, information management, the land and the seas will lead humanity towards “Realizing the Future We Want for All”.

- Dr. **Vanessa Lawrence**, Co-Chair UN-GGIM, Ordnance Survey International, United Kingdom (invited)
- Mr. **Mustapha Iptes**, Director, International Hydrographic Organization, Monaco
- Mr. **Donovan Storey**, Chief, Social, Policy and Population Section, United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), Thailand (invited)

1st FIG Young Surveyors Asia-Pacific Meeting

Friday, 20 June 09:00–18:00
Venue: Impiana Hotel
Commission: Young Surveyors
Chair: Ms. **Nur Zurairah Abdul Halim**, FIG Young Surveyors Network, Malaysia
Rapporteur: Mr. **Donmarl D. Camua**, Chair elect of FIG Young Surveyors Network, Philippines

Special Session on Social Tenure Domain Model: the Launching of the STDM Source Codes

Friday, 20 June 11:30–13:00
 Venue: Rooms 403 and 404, KLCC
 Chair: Mr. **Stig Enemark**, FIG Honorary President, Denmark
 Rapporteur: Mr. **Cyprian Selebalo**, Land and GLTN Unit, UN Habitat, Kenya

STDM is focused on people – all people and all types of “people-to-land” relationships. STDM began as an initiative to support pro-poor land administration, specifically in countries with very little cadastral coverage, STDM is also relevant in situations where a land rights infrastructure already exists; it supports and supplements existing approaches to enhance existing land administration and management. The releasing of the STDM source codes to the public and in particular to the land professionals and open-source community, the development of the STDM for various purposes and context specific customization will be accelerated, and where developers including from commercial operations can have complementary tasks.

This is a UN Habitat-GLTN/FIG Joint Session

FIG Foundation Fellowship – The Future of Surveying

Friday, 20 June 11:30–13:00
 Venue: Room 304, KLCC
 Chair: Mr. **John Hohol**, President of FIG Foundation, United States

Presentations by the eight Young Surveyors who have received the FIG Foundation Fellowship 2014

UN-GGIM-AP Executive Board Meeting (1 of 3)

Friday, 20 June 11:30–13:00
 Venue: Room 401, KLCC
 Chair: Dr. **Li Pengde**, UN-GGIM-AP President

- By invitation only

Building Information Modeling in Malaysia

Friday, 20 June 11:30–13:00
 Venue: Press Centre, KLCC
 Commission: 10
 Chair: Mr. **Ong See Lian**, National Delegate, FIG Commission 10
 Chair elect, Malaysia
 Rapporteur: Mr. **Robert Sinkner**, Chair, FIG Commission 10

- Presentations followed by discussion

Quek Jin Keat (Malaysia): High Level Cost Modelling of Elevated Deck & Linkway – the Importance of Key Performance Indicators for Cost Planning (7432)

James Kavanagh (United Kingdom): RICS Perspectives on Building Information Model (BIM) – BIM is More Than Buildings (7434)

Mohd Harris bin Mohd Ismail (Malaysia): BIM Initiatives in Malaysia Construction Industry (7437)

FIG History Symposium (1 of 3)

Friday, 20 June 11:30–13:00
 Venue: Room 405, KLCC
 Commission: IIHSM
 Chair: Mr. **Jan De Graeve**, Director of IIHSM, Belgium

- Introduction: Mr. **John Brock**, (Australia), Full Day Chairman
- Official Welcome: Mr. **Jan De Graeve**, (Belgium) Chairman International Institution for the History of Surveying & Measurement

John Brock (Australia): The Great Wall of China: The World’s Greatest Boundary Monument! (7126)

Oksana Sukhova (Ukraine): Obsolete Approach to Land Use (7253)

TS09A – Remote Sensing / Imagery Analysis and Modelling 2

Friday, 20 June 11:30–13:00
 Venue: Plenary Hall, KLCC
 Commission: 5
 Chair: Sr Dr. **Ayob Sharif**, Malaysia
 Rapporteur: Sr **Shabudin Saad**, Malaysia

Mazlan Hashim, Mohd Syafiq Shukor (Malaysia), **Shinya Numata** (Japan), **Samsudin Ahmad and Syarifuddin Misbari** (Malaysia): Mapping and Modelling of Animal Diversity Index in Green Campus Using Integrated Geospatial Technique and In-Situ Camera Trapping (6807)
This is a peer reviewed paper.

Christoph Strecha (Switzerland): The RayCloud – a Vision Beyond the Point Cloud (6851)

Grenville Barnes and Walter Volkmann (USA): Virtual Surveying: Mapping and Modeling Cadastral Boundaries Using Unmanned Aerial Systems (UAS) (7300)

TS09B – GNSS Measurement Techniques, Developments and Analysis

Friday, 20 June 11:30–13:00
 Venue: Conference Hall 1, KLCC
 Commission: 5
 Chair: Sr **Shabudin Saad**, United States
 Rapporteur: Sr **Alwi Mohd Noor**, Malaysia

Dirk Kowalewski (Germany): GNSS Receiver with a Open Interface (6784)

Ilike Deniz and Cetin Mekik (Turkey): Preliminary Study of Modeling the Precipitable Water Vapor Based on Radiosonde Data (6988)

Chika Okorocho and Oluropo Olajugba (Nigeria): Comparative Analysis of Short, Medium and Long Baseline Processing in the Precision of GNSS Positioning (7005)

Gintcho Kostov (Bulgaria): Study on the Quality of the GNSS Measurements in Static Mode If Applying Certain Values of the Parameters, Following the Current Regulatory Requirements (7090)

Maduabughichi Okezie, Victus Nnamdi Uzodinma and Njike Chigbu (Nigeria): Tropospheric Modeling in GNSS Observations (7164)

Ismail Sanlioglu and Tahsin Kara (Turkey): Analysis of Time Series About IGS Stations in Turkey Using AR and ARMA Models (7318)

TS09C – Informal and Customary Rights Management 1

Friday, 20 June 11:30–13:00
 Venue: Conference Hall 2, KLCC
 Commission: 7
 Chair: Mr. **Daniel Roberge**, Chair, FIG Commission 7, Canada
 Rapporteur: Mr. **Peter Laarakker**, Netherlands

Lahcen Bouramdane, Moha El-ayachi, Mohammed Oubaha and Younes Boulaghrad (Morocco): The New Face of the Informal Land Tenure Management in Morocco (6981)

Richard Grover (United Kingdom): Aboriginal Corporations as a Response to Poverty and Land Claim Settlements (7000)

Kwame Asiedu and Michael Barry (Canada): Social Network Analysis and Data Mining of Land Tenure Information in the Talking Titled System (7103)

TS09D – 3D Cadastre 1

Friday, 20 June 11:30–13:00
 Venue: Conference Hall 3, KLCC
 Commission: 7
 Chair: Assoc. Prof. Sr Dr. **Baharin Ahmad**, Malaysia
 Rapporteur: Mr. **Aina Edayu Ahmad**, Malaysia

Victor H. S. Khoo, Eric Low and Zhen Hao Ng (Singapore): 3D Laser Scanning to Detect Property Encroachment (6993)

Hiroyuki Hasegawa and Tsutomu Imase (Japan): Cadastre2014 Japan – Initiatives for Restoring Original Boundaries in Mountains and Forests by Using Past Aerial Photos (7009)

Trent Gulliver and Anselm Haanen (New Zealand): Developing a 3D Digital Cadastral System for New Zealand (7037)

Ulrich Gruber, Jens Riecken and Markus Seifert (Germany): Germany on the Way to 3D-Cadastre (7085)

Wahyu Marta Mutiarasari and Trias Aditya (Indonesia): Development of Structure-based Topology of 3D Spatial Databases for Storing and Querying 3D Cadastre Cases (7179)

TS09E – Deformation Monitoring 3

Friday, 20 June 11:30–13:00
Venue: Room 301, KLCC
Commission: 6
Chair: Assoc. Prof. **Sr Dr Zulkepli Majid**, Malaysia
Rapporteur: Mr. **Nurul Hawani Idris**, Malaysia

Edi Meier (Switzerland), **Rudolf Widmer-Schnidrig** (Germany) and **Christophe Nussbaum** (Switzerland):
Deformations and Global Forces: Seismic and Hydrostatic Leveling Records in the “Mont Terri” Rock Laboratory (Switzerland) (6887)
This is a peer reviewed paper.

Imrich Liptak, Jan Erdelyi, Alojz Kopacik and **Peter Kyrinovic** (Slovakia):
Bridge Monitoring Using TLS, Accelerometers and Ground Based Radar Interferometry (6878)

Sercan Bulbul and **Cevat Inal** (Turkey):
Usability of Cholesky Factorization Method in the Determination of Horizontal Deformations: a Case Study, Ermenek Dam (6854)

Raphael Ehigiator-Irughe, Jacob Ehiorobo and **Mabel Ehigiator** (Nigeria):
Prediction of Dam Deformation Using Kalman Filter Technique (6848)

TS09F – Public-Private Partnerships in Planning and Land Development 2

Friday, 20 June 11:30–13:00
Venue: Room 302, KLCC
Commission: 8, 9
Chair: Mr. **Wafula Nabutola**, Chair, FIG Commission 8, Kenya
Rapporteur: Ms. **Frances Plimmer**, Chair, FIG Commission 9, United Kingdom

Victoria Amietsenwu Bello and **Olusola Adebisi** (Nigeria):
Impact of the Federal University of Technology, Akure on Residential Property Values in Akure, Nigeria (7176)

Seda Nur Marabaoglu, Recep Nisanci, Osman Demir, Bayram Uzun, Usta Ziya and **Okan Yildiz** (Turkey):
Real Estate Evaluation Problems of Turkey (6949)

Sander Lenferink, Datuk Ary Samsura and **Erwin Van der Krabben** (Netherlands):
Tax Increment Financing as a Tool for Public Infrastructure Development: A Game Negotiation Experiment (7100)

Wafula Luasi Nabutola (Kenya):
Public-Private Partnerships in Planning and Land Development; the Opportunities and Challenges in the Kenyan Economy (7259)

Rahah Ismail (Malaysia):
Urbanisation, Internationalisation and Access to Housing (7384)

TS09G – Planning and Managing Urbanisation 1

Friday, 20 June 11:30–13:00
Venue: Room 303, KLCC
Commission: 8
Chair: Prof. Sr Dr. **Mazlan Hashim**, Malaysia
Rapporteur: Sr **Ahmad Azman bin Ghazali**, Malaysia

Siti Nor Afzan Buyadi, Wan Mohd Naim Wan Mohd and **Alamah Misni** (Malaysia):
Quantifying Green Space Cooling Effects on the Urban Microclimate Using Remote Sensing and GIS Techniques (6897)
This is a peer reviewed paper.

Victor Nnam, Ikechukwu Mmaduako, Chukwubueze Onwuzuligbo Chukwubueze, Godwin Nnam and **Makuachukwu Eze** (Nigeria):
Assessment of Spatial Urban Dynamics in Enugu City Using GIS and Remote Sensing (6908)

Madan Mohan (India):
3-D Digital Modelling using Multi-Spectral Remote Sensing Imagery: A Study of Million+ City, Faridabad, Sub-Region of Central NCR, Haryana State, India (7137)

Abdelwahed Elidrissi (Morocco):
Urban Planning in Morocco Between the Theoretical Basics and Legal Principles (7214)

Hassan Chtouki (Morocco):
The Environment Place in Spatial Planning: Example of Morocco (7218)

TS09H – Geospatial Data Processing 4

Friday, 20 June 11:30–13:00
Venue: Room 402, KLCC
Commission: 3
Chair: Dr. **Ioannidis Charalabos**, Greece
Rapporteur: Sr **Ng Eng Guan**, Malaysia

Siddique Ullah Baig and **Behnam Alizadehashrafi** (Malaysia):
3D Generalization of Boundary Representation (B-Rep) of Buildings (6862)

Mohd Sidek Abd Ghafar and **Fuziah Abu Hanifah** (Malaysia):
MyGeoOntology – An Information-Focused Geospatial Ontology for SDI towards Knowledge Interoperability (6874)
This is a peer reviewed paper.

Chengxi Bernad Siew and **Khairul Hafiz Sharkawi** (Malaysia):
A Tightly-Coupled XML Encoder-Decoder for 3D Data Transaction: A City Modelling Scenario (6903)
This is a peer reviewed paper.

Benjamin Schnitzer and **Tine Koehler** (Germany):
Urban Mining – a Geospatial Data Challenge (6946)
This is a peer reviewed paper.

TS09I – Building a Diverse Profession – Initiatives from Across the World

Friday, 20 June 11:30–13:00
Venue: Room 305, KLCC
Commission: 1, 2 and YS
Chair: Sr **Kwan Hock Hai**, Malaysia
Rapporteur: Sr **Lee Choon Bin**, Malaysia

Tugba Memisoglu and **Ebru Colak** (Turkey):
The Changing Woman Role of Surveyors in Turkey (6934)

Jennifer Eziaku Chigbu, Pamela Ibukunle and **Njike Chigbu** (Nigeria):
Gender Contributions to Sustainable Development in Nigeria: Enhancing the Gender Relevance by Constructive Engagement and Education (7160)

Kazuaki Fujii (Japan):
The Education for Cadastral Surveying and Young Cadastral Surveyors Network in Japan (6904)

Simon Callaghan (Australia):
The First Decade: Lessons Learned from SSSI's National YP Network (7215)

Abiodun Awofeko (Nigeria):
Surveying & Technology in a Changing Environment: Relevant Surveyor in the New Challenges (7083)

Jeff Needham (New Zealand):
NZIS – the Professional Body for a Bigger Future (7007)

TS09J – Blue Economy

Friday, 20 June 11:30–13:00
Venue: Room 306, KLCC
Chair: Mr. **Gordon Johnston**, MRICS, FIG Contact to IHO/FIG/ICA Advisory Board, United Kingdom
Rapporteur: Mr. **Michael Sutherland**, Chair, FIG Commission 4, Trinidad & Tobago

Michael Sutherland (Trinidad And Tobago) and **Gordon Johnston** (United Kingdom):
Blue Economy – Introduction (7354)

Mustafa Iptes (Monaco):
Sustaining the Role of Hydrography in Support of the Blue Economy (7406)

Roux Celine (Australia):
Innovative Geospatial Solutions towards a Sustainable Maritime Trade (6970)

Diane Dumashie (United Kingdom) and **Angela Etuonovbe** (Nigeria):
Blue Economy – An African Perspective (7405)

UN-ESCAP/FIG Joint Workshop on Regional Land Tenure Initiative for Asia and the Pacific

Friday, 20 June 14:30–16:00
 Venue: Room 402, KLCC
 Chair: Mr. **CheeHai Teo**, FIG President, Malaysia
 Rapporteur: Mr. **Rohan Benett**, University of Twente, Netherlands

The Regional Land Tenure Initiative in Asia Pacific is an attempt to consolidate the regional efforts towards secure tenure and property rights for all particularly for the poor, women and vulnerable groups. The Initiative was launched late last year with GLTN partners in the region and was highlighted in the Annual World Bank's Land and Poverty Conference in Washington alongside with other regional land initiatives. In partnership with FIG, UN-Habitat, FAO, UNESCAP, World Bank, ILC, Habitat for Humanity and other key partners, the Session will highlight current initiatives and programmes with a view to create a regional platform to share knowledge and further strengthen the collaboration in the sector. The Session will also serve as a call for regional stakeholders, prospective partners and individuals to actively participate in this Initiative in the coming years.

This session is supported by UNESCAP, UN Habitat-GLTN, FAO, World Bank, ILC

UN-GGIM-AP Executive Board Meeting (2 of 3)

Friday, 20 June 14:30–16:00
 Venue: Room 401, KLCC
 Chair: Dr. **Li Pengde**, UN-GGIM-AP President

- By invitation only

FIG Foundation – How to Write an Application

Friday, 20 June 14:30–16:00
 Press Center, KLCC
 Chair: Prof. **Mike Barry**, member of the Board of Directors of the FIG Foundation

- A guidance on how to write an application for funding of PhD Scholarships, Academic Research Grants etc.

Task Force on Property and Housing

Friday, 20 June 14:30–16:00
 Venue: Conference Hall 3, KLCC
 Chair: Prof. **Chryssy Potsiou**, FIG Vice President, Greece
 Rapporteur: Assoc. Prof. Sr Dr. **Norhaya Kamarudin**, Malaysia

Chryssy Potsiou (Greece): Task Force on Property and Housing: A Study on Informal Development in Europe and Central Asia (7329)

Winrich Voss (Germany): Is Affordable Housing Still Viable in Metropolitan Urban Development? (7305)

Steven Nystrom (USA) and **Chryssy Potsiou** (Greece): Methodology for Quantifying the Economic Impact of Land Policy (with Case Studies) (7419)

Collins Kowuor (Kenya): Off Plan Sales: Is it an Elixir for Property Financing in Emerging Markets? (7402)

Zailan binti Mohd Isa (Malaysia): Real Property Gains Tax and the Malaysian Housing Market (7390)

FIG History Symposium (2 of 3)

Friday, 20 June 14:30–16:00
 Venue: Room 405, KLCC
 Commission: I/HSM
 Chair: Ms. **Kelly Henderson**, Australia

Sergey Volkov and **Galina Kovalevskaya** (Russia): Land Policy of Russia – Millennium Experience (6868)

Azhari Mohamed (Malaysia): History of Leveling Practice in Malaysia (7373)

Jan de Graeve (Belgium): Cosmographia of Sebastian Munster in the 16th Century (7401)

ASEAN Flag Council Meeting

Friday, 20 June 14:45–16:30
 R 403 & 404, KLCC
 Chair: Mr. **Pengiran Matusin Matasan**, President of AFLAG, Brunei Darussalam,

- By invitation only

TS10A – Cost Effective Positioning and Technology

Friday, 20 June 14:30–16:00
 Venue: Plenary Hall, KLCC
 Commission: 5
 Chair: Mr. **Graeme Blick**, National Delegate, FIG Commission 5, New Zealand
 Rapporteur: Mr. **Aina Edayu Ahmad**, Malaysia

Severin Heuboeck and **Retscher Guenther** (Austria): Agricultural Forest Applications and Boundary Surveys Using Low-cost High Sensitivity GPS (HS-GPS) Receivers (6812)
This is a peer reviewed paper.

Tajul Ariffin Musa, Abdul-lah Hisam Omar, Ivin Amri Musliman, Siti Syukriah Khamdan and Yip Kit Meng (Malaysia): RFID-Based Cadastral Boundary Mark System (RCBMS) (6865)
This is a peer reviewed paper.

Sebastian Botsyo and **Kwabena Bofo** (Ghana): Design of Survey Beacons Information System with Google Earth Being the Medium for Location Based Geo-Visualization; Case Study – Greater Accra Region of Ghana (6771)

Fawzi Zarzoura (Egypt) and **Boris Mazurov** (Russia): Improve the Accuracy of SPP and Reduce the Cost When Using Global Navigation Satellite System (7070)

Ryan Keenan and **John Da Mina** (Australia): Engaging Commercial RTK Network Services for Precision and Availability – Experiences from Smartnet Australia (7181)

TS10B – Earth Geodynamics and Monitoring 2

Friday, 20 June 14:30–16:00
 Venue: Conference Hall 1, KLCC
 Commission: 5 and 6
 Chair: Dr. **Daniel Roman**, United States
 Rapporteur: Sr **Hazri Hassan**, Malaysia

Mustafa Zeybek, Ismail Sanlioglu and Temel Bayrak (Turkey): The Monitoring of Fast Progressive Landslide Movements in Taşkent/Konya via Rapid Static GNSS Techniques (7245)

Hasanuddin Z. Abidin, Heri Andreas, Irwan Gumilar and Bambang D. Yuwono (Indonesia): Performance of the Geometric-Historic Method for Estimating Land Subsidence in Urban Areas of Indonesia (6917)

Sanming Luo, Wanju Bo, Shuang Zhu and Liming Fu (China, PR): Ground Surface Deformation of L'Aquila Earthquake Revealed by InSAR Time Series (7051)

Neil Ashcroft (Singapore) and **Syamsul Bahri** (Indonesia): Combining Gns Measurement Technologies with Terrestrial to Improve Slope Stability Monitoring Accuracies (7064)

Chong Luh Lau, Halim Setan, Zulkepli Majid (Malaysia), **Albert Chong** (Australia) and **Mimi Diana Ghazali** (Malaysia): Investigation of the Optimal Resolution for Landslide Monitoring Using Terrestrial Laser Scanner (7052)

Khamarrul Razak, Rozaimi Che Hasan, Mohd Azwan Abbas, Lau Chong Luh, Zulkepli Majid, Lim Chor Sheng, Rabieahtul Abu Bakar, Suhaimi Jamaludin and Wan Abdul Aziz Wan Mohd Akib (Malaysia): Topographic Laser Scanning of Landslide Geomorphology System: Some Practical and Critical Issues (6939)
This is a peer reviewed paper.

TS10C – Informal and Customary Rights Management 2

Friday, 20 June 14:30–16:00
 Venue: Conference Hall 2, KLCC
 Commission: 7
 Chair: Sr **So Sun Sing**, Malaysia
 Rapporteur: Sr **Hashim Sibelik**, Malaysia

Marie-Christine D. Simbizi, Jaap Zevenbergen and Rohan Bennett (Netherlands): Measuring the Land Tenure Security of Sub Saharan Africa's Rural Poor (7261)

Grenville Barnes (USA): Land Administration of Communal Land: Lessons from the Ejidos in Mexico (7299)

Gandhi Subedi (Nepal) and **Peter Wyatt** (United Kingdom):

Land Administration and Economic Development: a Case Study of Property Formalization in Chulachuli Village of Eastern Nepal (6828)

Paul van der Molen (Netherlands): Engaging the Challenge of Rapid Urbanization and Slum Upgrading and Enhancing the Role of Land Surveyors (6929)
This is a peer reviewed paper.

John Kahi, Solomon Njogu and Danilo Antonio (Kenya): Social Tenure Domain Model: an Implementation of a Pro-Poor Land Rights Recordation Tool Using Open Source Technologies (7248)

Suon Sopha and Kan Vibol (Cambodia): Securing the Human Rights and Livelihoods Cambodian Indigenous Communities by Land Registration (7379)

TS10E – Engineering Surveying with Unmanned Aerial Vehicles (UAV) and Remote Sensing

Friday, 20 June 14:30–16:00
Venue: Room 301, KLCC
Commission: 6
Chair: Dr. **Gethin Roberts**, Chair, FIG Commission 6, China, PR
Rapporteur: Mr. **Mark Bell**, Australia

Wan Mohd Naim Wan Mohd, Mohd Azhafiz Abdullah and Suhaila Hashim (Malaysia): Accuracy Comparison of Digital Elevation Models Generated from Different Sources (6896)

Shattri Mansor and Habibeh Valizadeh Alvan (Malaysia): Earthquake Precursor from Satellite Imagery: Signals or Just Noise? (6885)
This is a peer reviewed paper.

Ninkov Tosa and Bulatovic Vladimir (Serbia): Modern Acquisition Technology of Spatial Data as a Basis of Environmental Engineering and Planning Projects (7334)

Hendriatiningsih Sadikin, Asep Yusup Saptari, Rizki Abdul Haris and Andri Hernandi (Indonesia): UAV System With Terrestrial Georeferencing For Small Area Mapping (7146)

TS10F – Property Taxation

Friday, 20 June 14:30–16:00
Venue: Room 302, KLCC
Commission: 9
Chair: Prof. Sr Dr. **Norziha Md Zain**, Malaysia
Rapporteur: Prof. Sr Dr. **Ting Kien Hwa**, Malaysia

William McCluskey (United Kingdom): The Property Tax: Its Future in the 21st Century (6763)

Kauko Viitanen (Finland) and **Vince Mangioni** (Australia): Valuing Land for Land Tax Purposes in Highly Urbanized Cities (6870)
This is a peer reviewed paper.

Ruud Kathmann and Marco Kuijper (Netherlands): Cooperation Between Taxpayers and Municipalities for Valuation Purposes (7068)

TS10G – Planning and Managing Urbanisation 2

Friday, 20 June 14:30–16:00
Venue: Room 303, KLCC
Commission: 8
Chair: Assoc. Prof. Sr **Muhamad Jaafar**, Malaysia
Rapporteur: Mr. **Saiful Wazlan Wahab**, Malaysia

Uznir Ujang, Alias Abdul Rahman (Malaysia) and **François Anton** (Denmark): An Approach of Instigating 3D City Model in Urban Air Pollution Modeling for Sustainable Urban Development in Malaysia (6882)
This is a peer reviewed paper.

Amina Dienye and Ukeame Ajie (Nigeria): A GIS Based Road Network System of Port Harcourt, Nigeria (6920)

Kevin Musungu (South Africa): Participatory Mapping: Methods, Results and Lessons from Cape Town (6944)

Datuk Ary Samsura and Erwin Van der Krabben (Netherlands): Urban Land Readjustment as a Strategic Tool for Urban Redevelopment: Experimenting Negotiations Between Landowners (7099)

Theo Koetter (Germany): Land Management in the Context of Urban Regeneration (7393)

Beytullah Yalcin, Mevlut Uyan and I. Kursat Gocergi (Turkey): Urban Renewal Site Selection Using GIS in Karatay Region, Konya/ Turkey (7077)

TS10H – Geospatial Data & Geospatial Planning

Friday, 20 June 14:30–16:00
Venue: Room 304, KLCC
Commission: 3 and 8
Chair: Mr. **Yerach Doytsher**, Chair, FIG Commission 3, Israel
Rapporteur: Mr. **Kwame Tenadu**, Chair Elect, FIG Commission 8, Ghana

Maceda Uche Michael-Agwuoke (New Zealand): Consideration of Emission Ratios in Sustainable/Integrated Municipal Solid Waste Management Planning (6873)

Rachid Bouzidi (Morocco): Arab Historical Cities: Challenges of Conservation, Management and Developpement – Some Case Studies (6952)

Bernard, Orji Ekpete (Nigeria) and **Maceda, Uche Michael-Agwuoke** (New Zealand): Implementing ‘Greenwaste’ Management in a Sustainable City of Lagos, Nigeria (7008)

Jennifer Eziaku Chigbu, Pamela Ibukunle, Chigbu Njike and Susan C. Nmeregini (Nigeria): Investigating the Role of Multi-National Corporations in Sustainable Environmental Management in Niger – Delta Region of Nigeria – an Overview (7018)

David Jonas (Australia): Utilising the Virtual World for Urban Planning and Development (7036)

TS10I – Land Administration and Land Reforms

Friday, 20 June 14:30–16:00
Venue: Room 305, KLCC
Commission: 7
Chair: Assoc. Prof. Sr Dr. **Mohd Sanusi S. Ahamad**, Malaysia
Rapporteur: Col. Sr Dr. **Mohd Zambri Mohamad Rabab**, Malaysia

Gürsel Küsek (Turkey): Land Consolidation Practices in Turkey and Some Results (7416)

Divankhan Ahadov and Rovshan Ahadli (Azerbaijan): Land Reform an Its Result in Azerbaijan (6770)

Tayfun Cay and Nuh Toklu (Turkey): Evaluation of Land Reform Policies in Turkey (6787)

Hj Ishak Abu Bakar (Malaysia): Gazetting the PLUS North-South Expressways – The Challenges (7381)

TS10J – Integrated Hydrography

Friday, 20 June 14:30–16:00
Venue: Room 306, KLCC
Commission: 4
Chair: Dr. **Abd. Majid A. Kadir**, Malaysia
Rapporteur: Sr **Sohaime Rasidi**, Malaysia

Jörg Reinking (Germany): Ship-Based Oceanwide Observation of Sea Surface Heights in Consideration of Hydrodynamic Corrections (6837)

Jonathan Li, Haiyan Guan, Yongtao Yu, Cheng Wang and Fukai Jia (China, PR): Mapping a Tropical Marine Environment using a Vessel-borne Mobile Laser Scanning System: A Pilot Study (7150)

Isaac Larbie (Ghana): The Importance of Hydrographic Surveying in the Development of a Water/Lake Transportation System in Ghana (7028)

Michael Sutherland (Canada), **Keith Miller, Dexter Davis, Amit Seeram and Demi Singh** (Trinidad And Tobago): Modeling Projections of Potential Sea Level Rise Impacts on Some Caribbean Communities: Is it Worth the Effort? (6928)
This is a peer reviewed paper.

Chaiditsa Bolanou and John Kioussopoulos (Greece): Marine Spatial Planning in Hellas; Recent Facts and Perspectives (7275)

Byungmoon Park, Tajul A Musa, Hungkyu Lee, Yunsoo Choi and Hasu Yoon (Republic of Korea): Analysis of GPS Observations at IEOO Ocean Research Station in Korea (7417)

Mr. **Changsun Cho, Hasu Yoon, Yunsoo Choi, Hungkyu Lee, Minchol Chang and Yong Huh** (Republic of Korea): Analysis of National Vertical Datum Using Tidal Gauge Bench Mark in Korea (7418)

UN-ESCAP/FIG Joint Workshop on Regional Land Tenure Initiative for Asia and the Pacific

Friday, 20 June 16:30–18:00

Venue: Room 402, KLCC

Chair: Mr. **Jean du Plessis**, Land and GLTN Unit, UN Habitat, Kenya

Rapporteur: Mr. **Rohan Benett**, University of Twente, Netherlands

The Regional Land Tenure Initiative in Asia Pacific is an attempt to consolidate the regional efforts towards secure tenure and property rights for all particularly for the poor, women and vulnerable groups. The Initiative was launched late last year with GLTN partners in the region and was highlighted in the Annual World Bank's Land and Poverty Conference in Washington alongside with other regional land initiatives. In partnership with FIG, UN-Habitat, FAO, UNESCAP, World Bank, ILC and other key partners, the Session will highlight current initiatives and programmes with a view to create a regional platform to share knowledge and further strengthen the collaboration in the sector. The Session will also serve as a call for regional stakeholders, prospective partners and individuals to actively participate in this Initiative in the coming years.

This session is supported by UNESCAP, UN Habitat-GLTN, FAO, World Bank, ILC

UN-GGIM-AP Executive Board Meeting (3 of 3)

Friday, 20 June 16:30–18:00

Venue: Room 401, KLCC

Chair: Dr. **Li Pengde**, UN-GGIM-AP President

- By invitation only

UN Habitat-GLTN/FIG Joint Technical Session on Participatory and Inclusive Land Readjustment (PiLAR)

Friday, 20 June 16:30–18:00

Venue: Press Centre, KLCC

Chair: Mr. **Paul van der Molen**, Kadaster, Netherlands

Rapporteur: Mr. **Christiaan Lemmen**, FIG OICRF, Netherlands

UN-Habitat and GLTN along with key partners have been working on improving the supply of serviced urban land at all levels, redeveloping and densifying dilapidated and sparsely populated urban neighborhoods, and reducing slums, which have recently been proliferating in cities especially in the developing world at an alarming pace. PiLaR helps to realize these sustainable urbanization goals through fair, negotiated and proactive processes. This session envisages to provide opportunities whereby the tool – PiLaR – can be introduced, current developments and future plans in regard to its implementation can be presented and discussed.

FIG History Symposium (3 of 3)

Friday, 20 June 16:30–18:00

Venue: Room 405, KLCC

Commission: IHSM

Chair: Mr. **John Brock**, Australia

Jouni Johannes Anttonen (Finland):

Parental Advisory: Kids, Don't Try This at Home! Surveying in Donald Duck and Mickey Mouse Comics (7369)

Azhari Mohamed (Malaysia): History of Surveying & Mapping in Malaysia (7372)

Jan de Graeve (Belgium): Mercator's Globes for Murad III's Observatory in Turkey (1569) (7399)

Kelly Henderson (Australia): Adelaide: Masterpiece of Malaya's William Light: An Ideal City, Its Origins, Scientific Survey and UNESCO World Heritage Nomination (7411)

FIG Presidents' Meeting

Friday, 20 June 16:30–19:30

Venue: Room 303, KLCC

Chair: Mr. **CheeHai Teo**, FIG President, Malaysia

- Meeting of Presidents and head of delegations of FIG member associations.
- By invitation only

Working Group on the Global Geodetic Reference Frame for Sustainable Development

Friday, 20 June 18:00–20:00

Venue: Rooms 403 and 404, KLCC

Chair: Norway and Australia

TS11A – Earth Geodynamics and Monitoring 3

Friday, 20 June 16:30–18:00

Venue: Plenary Hall, KLCC

Commission: 5 and 6

Chair: Mr. **Azhari bin Mohamed**, Malaysia

Rapporteur: Sr **Engku Mohd Adlin Engku Habib**, Malaysia

Mohamad Asrul Mustafar, Wim J. F. Simons (Netherlands), **Kamaludin Mohd Omar** (Malaysia) and **Boudewijn A. C. Ambrosius** (Netherlands): Monitoring of Local Deformations in North Borneo (6991)

Mila Atanasova-Zlatareva (Bulgaria): Research of the Horizontal Crustal Motions, Based on GPS Data for the Territory of Bulgaria and the Balkans (7093)

Muhamad Al Rajhi, Ali Al Omar, Ramazan Yanar, Fahri Kartal and Kamil Eren (Saudi Arabia): Studies of Tectonic Movements in Saudi Arabia Using CORS (7138)

Vera Sadarviana, Hasanuddin Zainal Abidin, Djoko Santoso, Joenil Kahar and Achmad Ruchlihadiana Tisnasendjaja (Indonesia): The GPS Data Campaign for the Slip Surface Estimation Ciloto Landslide Zone Case Study, West Java, Indonesia (7140)

Meiriska Yusufania, Irwan Meilano and Dina A. Sarsito (Indonesia): The Utilization Of Spatial Filtering for Tectonic Strain Study Based on SUGAR (SUMATRAN GPS ARRAY) Data 2006 – 2008 Study Case: The September 2007 Bengkulu Earthquake (7226)

Biswajeet Pradhan and Omar F. Alahuwaynee (Malaysia): Ensemble of Data-Driven EBF Model with Knowledge Based AHP Model for Slope Failure Assessment in GIS Using Cluster Pattern Inventory (6811)
This is a peer reviewed paper.

Haluk Ozener and Bahadir Aktug (Turkey): Geodetic Measurements for Earthquake Studies in Turkey (7388)

TS11B – Developments with Unmanned Aerial Vehicles (UAV)

Friday, 20 June 16:30–18:00

Venue: Conference Hall 1, KLCC

Commission: 5

Chair: Dr. **Daniel Roman**, United States

Rapporteur: Sr **Saiful Aman Sulaiman**, Malaysia

Catur Aries Rokhmana (Indonesia): Mapping the Outermost Small Islands Utilizing Uav-Based Aerial Photography (6834)

Maria Henriques, Ana Fonseca, Dora Roque, José Lima and João Marnoto (Portugal): Assessment Quality of an Uav-Based Orthomosaic and Surface Model of a Breakwater (6951)
This is a peer reviewed paper.

Philipp Amon, Peter Rieger, Ursula Riegl and Martin Pfennigbauer (Austria): Introducing a New Class of Survey-Grade Laser Scanning with Unmanned Aerial Systems (UAS) (7074)

Cornelis Stal, Britt Lonneville, Timothy Nuttens, Philippe De Maeyer and Alain De Wulf (Belgium): Highly Detailed 3D Modelling of Mayan Cultural Heritage Using an UAV (7091)

Oya Erenoglu, R. Cuneyt Erenoglu and Ozgun Akcay (Turkey): Determination Surface Characteristics and Alteration of Koru Mining Area (NW Turkey) by UAV Photogrammetry (7221)

R. Cuneyt Erenoglu, Ozgun Akcay, Oya Erenoglu, Ebru Sengul Uluocak and Zeki Karaca (Turkey): UAV Based Monitoring of Adatepe Landslide, Canakkale, NW Turkey (7223)

Insu Lee, Jihun Kang, Kil Jae Lee, Myong Kun Lee and Young Jin Lee (Republic of Korea): Applicability of Rotary UAV (Unmanned Aerial Vehicle) for Vegetable Crop Investigation (7292)

TS11C – 3D Cadastre 2

Friday, 20 June 16:30–18:00

Venue: Conference Hall 2, KLCC

Commission: 7

Chair: Sr **Shaharuddin Saat**, Malaysia

Rapporteur: Sr Dr. **Khamarrul Azahari Razak**, Malaysia

Tan Liat Choon and Looi Kam Seng (Malaysia): Developing Infrastructure Framework to Facilitate the Malaysian Multipurpose 3D Cadastre (6794)
This is a peer reviewed paper.

Teng Chee Hua, Mohd Yunus Mohd Yusoff and Nur Zurairah Abdul Halim (Malaysia): The Development of 3D City Model for Putrajaya MPC Database (6816)
This is a peer reviewed paper.

Edward Duncan and Bernad Siew (Malaysia): A Geometric-Topologic Exemplification for 3D Cadastre (6913)
This is a peer reviewed paper.

Ammar Kashram and Neeraj Dixit (Bahrain): Transition of Property Registration from Paper to 2D to 3D – A Case Study from Bahrain (6941)
This is a peer reviewed paper.

TS11D – Different Aspects for Planning and Governance

Friday, 20 June 16:30–18:00
Venue: Conference Hall 3, KLCC
Commission: 8
Chair: Dr. **Eran Sadek Said Md Sadek**, Malaysia
Rapporteur: Mr. **Khairul Hafiz Sharkawi**, Malaysia

Behnam Alizadehashrafi and **Siddique Ullah Baig** (Malaysia): Framework for Malaysian 3D SDI in CityGML (6899)
This is a peer reviewed paper.

Oyewole Mustapha Bello and **Tunbosun Biodun Oyedokun** (Nigeria): Borrower Attributes as Mortgage Default Triggers: Evidence from Nigerian Lending Market (7174)

Ibrahim Usman Jibril (Nigeria): Nasarawa Development Platform: a Progress Report on the Development of Spatial Data Infrastructure in Nasarawa State – Nigeria (7309)

Udiana Wahyu Deviantari, Didik Wihardi and **Yuliana Susilowati** (Indonesia): Referral of Regional Spatial Plans (RTRW) by Analytical Hierarchy Process (AHP) Method (Case study: East Kalimantan Province Area) (7041)

Pal Nikolli, Bilal Draci (Albania) and **Bashkim Idrizi** (Macedonia, FYROM): Territorial/Spatial Planning in Albania (7076)

Azzan Mohammed Azzan and **Said Salmin Ufuzo** (Tanzania): Coastal Community and Land Resources, a Case Study Of Kiwengwa Coastal Village –Zanzibar Tanzania (6789)

TS11E – Engineering Surveying

Friday, 20 June 16:30–18:00
Venue: Room 301, KLCC
Commission: 6
Chair: Assoc. Prof. Sr Dr. **Zulkiflee Abd Latif**, Malaysia
Rapporteur: Mr. **Aina Edayu Ahmad**, Malaysia

Lui Vincent (Hong Kong SAR, China) and **Joel Van Cranenbroeck** (Belgium): The Reasons to Succeed and to Fail a GNSS RTK Positioning Infrastructure Project (7335)

Ali Jamali (Malaysia), **Francois Anton** (Denmark) and **Pawel Boguslawski** (Malaysia): Trimble LaserAce 1000 Accuracy Evaluation for Indoor Data Acquisition (6902)

Mark Bell (Australia): Strategic Network Level Mapping of Underground Assets using Ground Penetrating Radar (7049)

Jon Warren and **Arnab Bhowmick** (USA): Mobile Digital Imagery Mapping – a Case Study of a 2,500 kms Project (7263)

TS11F – Real Estate Investment

Friday, 20 June 16:30–18:00
Venue: Room 302, KLCC
Commission: 9
Chair: Ms. **Frances Plimmer**, Chair, FIG Commission 9, United Kingdom
Rapporteur: Mr. **Dennis Webb**, United States

Elvin Fernandez (Malaysia): International Valuation Standards Council – Building Trust in Valuation (7352)

Ting Kien Hwa (Malaysia): Retail Market Studies for the Capital Market: Form Versus Substance (6792)
This is a peer reviewed paper.

TS11H – Land Use and Land Information

Friday, 20 June 16:30–18:00
Venue: Room 304, KLCC
Commission: 3 and 8
Chair: Sr **Ahamad Zakaria**, Malaysia
Rapporteur: Sr **Hamdan Ab. Aziz**, Malaysia

Mohd Sanusi S. Ahamad and **Mohamad Yusry Abu Bakar** (Malaysia): GIS Based Prescriptive Model for Solving Optimal Land Allocation (6783)
This is a peer reviewed paper.

Hardi Fadillah (Malaysia): Land Information System for Revenue Planning, Estimates and Collection (7195)

Ionut Cristian Savoiu and **Ciprian Gabriel Savoiu** (Romania): Land Administration Domain Model: Opportunities for Enhancing Systematic Registration in Romania (7161)

Romer Kristi Aranas, Rhodora Gonzalez and **Louie Balicanta** (Philippines): Linking the Land Information Systems in the Philippines Using the LADM as a Global Schema (7241)

TS11I – Improved Service Provision using Ethical Approaches – What

Friday, 20 June 16:30–18:00
Venue: Room 305, KLCC
Commission: 1 and 2
Chair: Ms. **Leonie Newnham**, Chair, FIG Commission 1, Australia
Rapporteur: Ms. **Robyn McCutcheon**, Vice Chair of Adm., FIG Commission 1, Australia

Chima Ogba (Nigeria): Building Moral Foundation for Ethical Professional Practice: The Nigerian Surveyors Experience (7071)

Theophilus Akinola and **Gaius Ojo** (Nigeria): Survey Professional Ethics in Nigeria – On a Downward Spin? (7277)

Gary Strong (United Kingdom): Why Technical Standards Are Not Enough for Professionals Working in Land, Property and Construction and the Importance of International Standards on Ethics (7296)

TS11J – Marine Spatial Information Management

Friday, 20 June 16:30–18:00
Venue: Room 306, KLCC
Commission: 4
Chair: Sr **Rusli Othman**, Malaysia
Rapporteur: Sr **Nazri Othman**, Malaysia

Mohammad Zakri Tarmidi, Abdul Rashid Mohamed Shariff, Zelina Zaiton Ibrahim, Ahmad Rodzi Mahmud and **Abdul Halim Hamzah** (Malaysia): Issues and Challenges in Managing Malaysia's Marine Spatial Information Sharing (6796)
This is a peer reviewed paper.

Rasheila Rahibulsadri, Abdullah Hisam Omar, Ashraf Abdullah, Wan Muhammad Aizzat Wan Azhar and **Chan Keat Lim** (Malaysia): Tidal Datum Consistency for Marine Cadastre Littoral Zone Commencement in Malaysia (6863)

Robin Seet (Malaysia), **David Forrest** and **Jim Hansom** (United Kingdom): Determining the Maritime Baseline for Marine Cadastre (6839)
This is a peer reviewed paper.

Ashraf Abdullah, Abdullah Hisam Omar, Chan Keat Lim, Zakaria Mat Arof and **Hasan Jamil** (Malaysia): The Development of Marine Cadastre Conceptual Model for Malaysia (6866)
This is a peer reviewed paper.

Isa Hamid-Mosaku, Mohd Razali Mahmud and **Mohd Safie Mohd** (Malaysia): Marine Activities and Delineation Zones: In the Context of Marine Geospatial Data Infrastructure (MGDI) decision (6890)
This is a peer reviewed paper.

Saturday, 21 June 2014

FIG General Assembly – Part 2

Saturday, 21 June 09:00–13:00
Venue: Grand Ballroom 1, KLCC
Chair: Mr. **CheeHai Teo**, FIG President, Malaysia

- For all FIG members
- Open for observers

FIG General Assembly – Part 2 – and Closing

Saturday, 21 June 14:00–16:00
Venue: Grand Ballroom 1, KLCC
Chair: Mr. **CheeHai Teo**, FIG President, Malaysia

- For all FIG members
- Open for observers

Farewell Reception (Bulgaria)

Saturday, 21 June 16:00–17:00
Venue: Grand Ballroom 2, KLCC

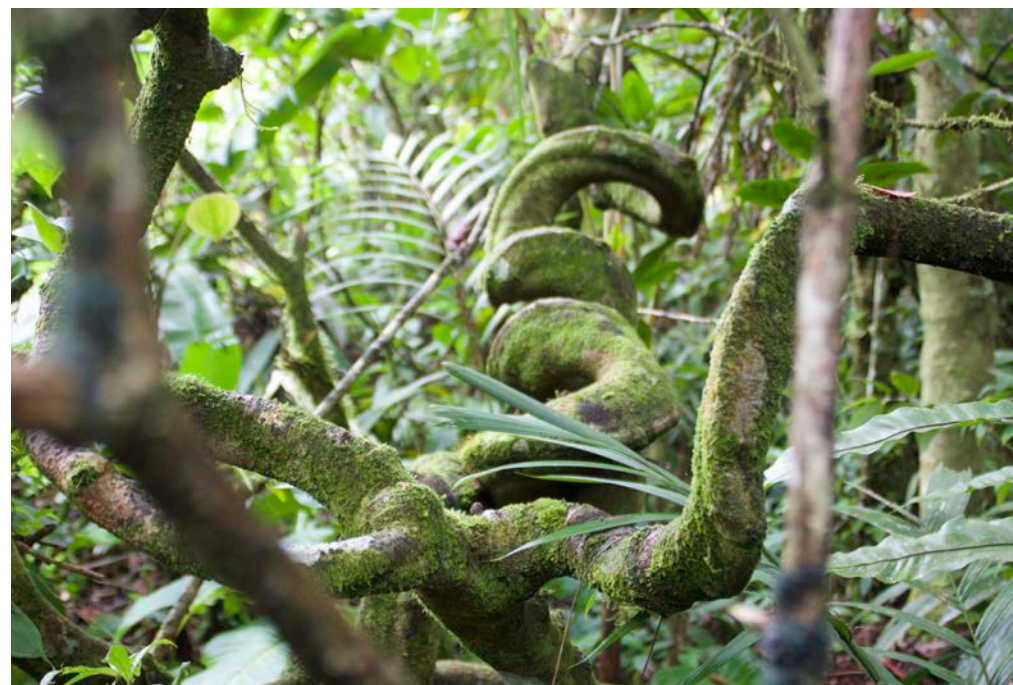
Delegates are invited to farewell the Congress and its host city in an informal environment. Join us as we toast to a successful Congress and at the same time have a taste of Working Week 2015 in Bulgaria.

Sunday, 22 June 2014

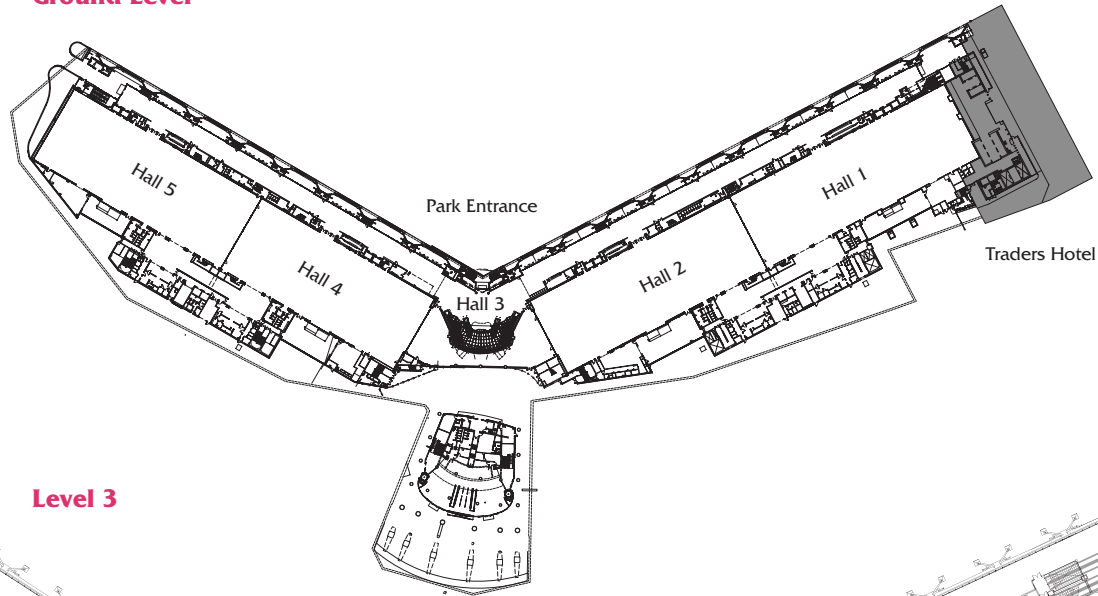
FIG Council Meeting

Sunday, 22 June 09:00–16:00
Venue: KLCC

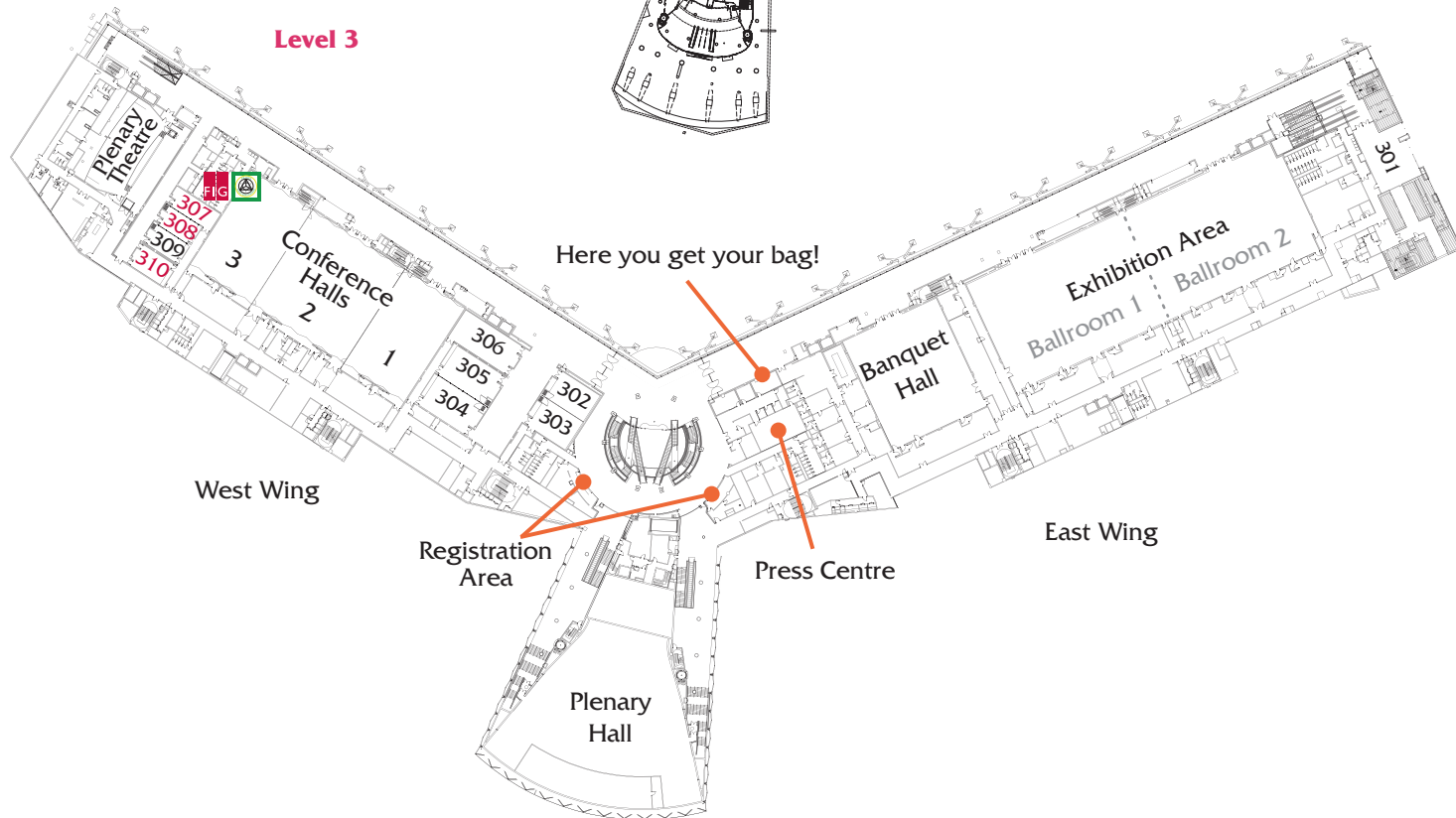
- By invitation only



Ground Level



Level 3



Events and Locations

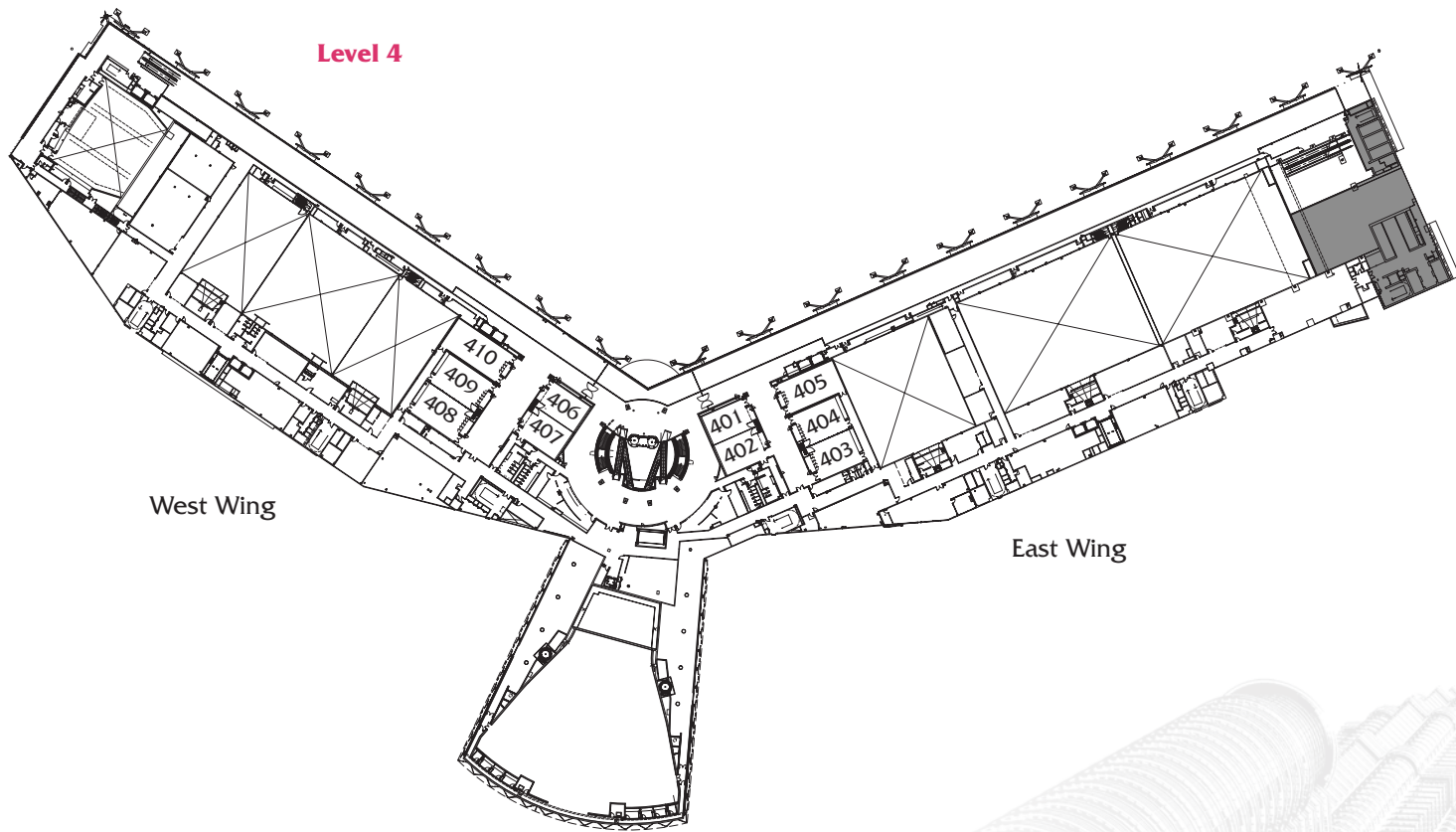
Opening Ceremony	Plenary Hall
Welcome Reception	Hall 1 (Ground Level)
General Assembly	Conference Hall 2 (Session 1), Ballroom 1 (Session 2)
Plenary Sessions	Plenary Hall
Technical Sessions, Special Sessions and Forums	Rooms 301–306, Press Centre, Conference Room 1–3, Rooms 401–405
Office – FIG/LOC	Room 307
Office – FIG President	Room 308
Speakers' Preparation Room	Room 310
Malaysian Evening	Hall 1 (Ground Level)
Gala Dinner	Grand Ballroom, Mandarin Oriental Hotel Kuala Lumpur
FIG Farewell Reception	Ballroom 2 (Level 3)

Lunch and Coffee Breaks

17–19 June lunch and coffee will be served during the breaks at Level 3, East Wing, in the exhibition area. 20 June lunch and coffee is served at the Ground Level, East Wing. The Young Surveyors will have lunch at Impiana Hotel.

Exhibition

The exhibition will run from 17–19 June at the KLCC, Level 3 (Ballrooms 1 and 2).



Programme at a Glance

Joint Sessions and Forums:

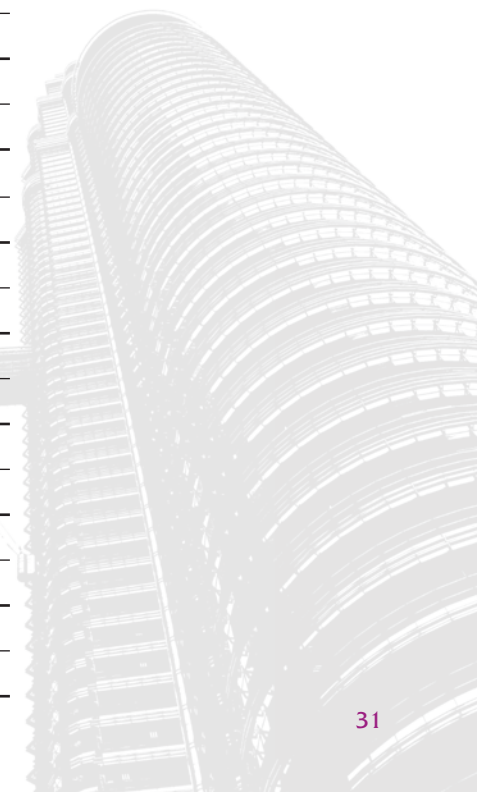
- A** 2014 FIG Director Generals Forum (by invitation only): Tuesday 17 June 9:00–10:45 and 11:30–13:00, Wednesday 18 June 14:30–16:00 and 16:30–18:00
- B** FIG Member Associations' Forum (by invitation only): Tuesday 17 June 9:00–10:45 and 11:30–13:00
- C** Task Force on Surveyors and the Climate Change: Tuesday 17 June 9:00–10:45
- D** 2nd FIG Young Surveyors Conference: Tuesday 17 – Thursday 19 June 9:00–18:00
- E** FIG /UN-Habitat-GLTN Joint Technical Session on Improving Women's Access to Land and Property: Tuesday 17 June 11:30–13:00
- F** Special Carbon Offset Programme – Let's Meet & Green: Wednesday 18 June 11:00–14:00
- G** FIG/UN-Habitat-GLTN Joint Technical Session on Valuation of Unregistered Land (VaLURL): Wednesday 18 June 11:30–13:00
- H** FIG/World Bank: Fit-for-Purpose/Pro-Poor Land Management: Wednesday 18 June 11:30–13:00
- I** Standards Networks /Roundtable: Wednesday 18 June 11:30–13:00
- J** 2014 FIG Academic Members Forum (by invitation only): Wednesday 18 June 14:30–16:00 and 16:30–18:00
- K** French Speaking Sessions: Wednesday 18 June 14:30–16:00 and 16:30–18:00
- L** Innovative Land Administration Systems. Well-Functioning Cadastral Systems – Examples from the Nordic Countries: Wednesday 18 June 14:30–16:00 and 16:30–18:00
- M** Africa Task Force: Thursday 19 June 8:00–9:00
- N** UN-Habitat/GLTN/Kadaster: Operationalisation of the Continuum of Land Rights and STDM Country Level Implementation (by invitation only): Thursday 19 June 9:00–18:00
- O** FIG/FAO Roundtable on VGGT and Valuation Standards: Thursday 19 June 11:30–13:00
- P** FIG/UN-Habitat-GLTN Joint Technical Session on Cost and Financing Land Administration Systems (CoFLAS): Thursday 19 June 11:30–13:00
- R** Joint FIG Commission 5 / UN-GGIM-AP Sessions on Global Geodetic Reference Frame and CORS: Thursday 19 June 11:30–13:00, 14:30–16:00 and 16:30–18:00
- S** Risk Management and Disaster Management. Joint FIG Commission 3 / ASEAN Flag session: Thursday 19 June 11:30–13:00
- T** Disaster and Environmental Management. Joint FIG Commission 8 / ASEAN Flag Session: Thursday 19 June 14:30–16:00.
- U** FIG/FAO Special Session on the Implementation of VGGT: Thursday 19 June 14:30–16:00
- V** Cadastre 2014 – From Vision to Practice and Beyond: Thursday 19 June 14:30–16:00 and 16:30–18:00
- W** FIG/UN-Habitat-GLTN Joint Technical Session on the Surveying Profession and Grassroots-led Initiatives: Thursday 19 June 16:30–18:00
- X** 2014 FIG Corporate Members Meeting (by invitation only): Thursday 19 June 16:30–18:00
- Y** 1st FIG Young Surveyors Asia-Pacific Meeting: Friday 20 June 9:00–18:00
- Z** FIG/UN-Habitat-GLTN Special Session on Social Tenure Domain Model: the Launching of the STDM Source Code: Friday 20 June 11:30–13:00
- AA** Building Information Modeling: Friday 20 June 11:30–13:00
- AB** FIG History Symposium: Friday 20 June 11:30–18:00
- AC** FIG Workshop on Regional Land Tenure Initiative for Asia and the Pacific: Friday 20 June 14:30–16:00 and 16:30–18:00
- AD** Task Force on Property and Housing: Friday 14:30–16:00
- AE** FIG/UN-Habitat-GLTN Joint Technical Session on Participatory and Inclusive Land Readjustment (PiLAR): Friday 20 June 16:30–18:00

Time	Friday 13 June	Saturday 14 June	Sunday 15 June	Monday 16 June		
8:00			Registration opens at 13:00	Registration (8:00–18:00)		
9:00		Council Meeting	ACCO Meeting Current and new chairs	FIG General Assembly Session 1		
10:00					UN-Habitat/GLTN/FIG YSN Training of Trainers for Social Tenure Domain Model (STDM) – PNB Darby Park	UN-Habitat/GLTN/FIG YSN Training of Trainers for Social Tenure Domain Model (STDM) – PNB Darby Park
11:00						
12:00						
13:00	Lunch 13:00–14:00					
14:00		Council Meeting	ACCO Meeting New chairs	FIG General Assembly Session 1		
15:00	UN-Habitat/GLTN/FIG YSN Training of Trainers for Social Tenure Domain Model (STDM) – PNB Darby Park				GLTN/FIG YSN Training of Trainers for Asia-Pacific Young YS – PNB Darby Park	UN-Habitat/GLTN/FIG YSN Training of Trainers for Social Tenure Domain Model (STDM) – PNB Darby Park
16:00						
17:00						
18:00				Welcome Reception		
19:00						
20:00			Council and ACCO Dinner			
21:00						

Exhibition								
Tuesday 9:00–19:00	Wednesday 9:00–19:00	Thursday 9:00–16:30		Friday 9:00–16:30	Saturday 9:00–16:30	Sunday 9:00–16:30		
Tuesday 17 June	Wednesday 18 June	Thursday 19 June	Friday 20 June	Saturday 21 June	Sunday 22 June	Time		
Registration (8:00–18:00) Comm. 1–5 Annual Meetings	Registration (8:00–18:00) Comm. 6–10 Annual Meetings	Registration (8:00–18:00) M	Registration (8:00–16:00)			8:00		
15 parallel Technical Sessions, Special Sessions and Forums A, B, C, D	Plenary Session 2	Plenary Session 3 N	Plenary Session 4 Y	FIG General Assembly Session 2	Council Meeting Current and new Council and new ACCO chairs	9:00		
				Tea/Coffee Break 10:30–11:30	Tea/Coffee Break 10:30–11:30	10:00		
Tea/Coffee Break (11:00–11:30)	Tea/Coffee Break (11:00–11:30)	Tea/Coffee Break (11:00–11:30)	Tea/Coffee Break (11:00–11:30)			11:00		
15 parallel Technical Sessions, Special Sessions and Forums A, B, D, E	15 parallel Technical Sessions, Special Sessions and Forums D, F, G, H, I	15 parallel Technical Sessions... D, N, O, P, R, S	Opening of 16 th ISC 2014 Congress	15 parallel Technical Sessions... Z, AA, AB	UN-GGIM-AP Executive Board Meeting 11:30–18:00	FIG General Assembly Session 2	Council Meeting Current and new Council and new ACCO chairs	12:00
Lunch 13:00–14:30	Lunch 13:00–14:30	Lunch 13:00–14:30	Lunch 13:00–14:30	Lunch 13:00–14:00	Lunch 13:00–14:00	13:00		
Opening Ceremony	15 parallel Technical Sessions, Special Sessions and Forums A, D, J, K, L	15 parallel Technical Sessions, Special Sessions and Forums D, N, R, T, U, V	15 parallel Technical Sessions... AB, AC, AD	ASEAN Flag Council Meeting	FIG General Assembly Session 2 and Closing Ceremony	Council Meeting Current and new Council	14:00	
Tea/Coffee Break Exhibition opens	Tea/Coffee Break	Tea/Coffee Break	Tea/Coffee Break		FIG General Assembly Session 2 and Closing Ceremony	Council Meeting Current and new Council	15:00	
Plenary Session 1	15 parallel Technical Sessions, Special Sessions and Forums A, D, J, K, L	15 parallel Technical Sessions, Special Sessions and Forums D, N, R, V, W, X	15 parallel Technical Sessions, Special Sessions and Forums AB, AC, AE		Farewell Reception – FIG 2015		16:00	
							17:00	
							18:00	
							19:00	
							20:00	
Malaysian Evening/ Foundation Dinner 20:00–23:00	Commission Dinners	Gala Dinner 19:30–23:30					21:00	

Technical Tours:

- TT1 – Perbadanan Putrajaya (Putrajaya Corporation)
– Wednesday, 18 June 14:00–19:00
- TT2 – National Valuation Institute (INSPEN)
– Wednesday 18 June 14:00–18:00 (~ 4 hours)
- TT3 and TT4 – Mass Rapid Transit (MRT)
– Wednesday 18 and Thursday 19 June 14:00–18:00
- TT5 – Storm-Water Management and Road Tunnel (SMART Tunnel)
– Thursday 19 June 14:00–18:00
- TT6 – Malaysian Centre for Geospatial Data Infrastructure (MACGDI)
– Thursday 19 June 14:00–18:00
- TT7 – Department Of Survey And Mapping Malaysia
– Friday 20 June 14:30–18:30



UN-Habitat/GLTN/FIG STDM Training of Trainers Workshop

Delivered by GLTN Secretariat Jointly with FIG Young Surveyors Network

Programme Overview

Friday, 13 June 2014	
13:00–18:00	UN-Habitat/GLTN/FIG/YSN Training of Trainers for Social Tenure Domain Model (STDM) Use and Application – Day 1 Venue: PNB Darby Park • By invitation only
Saturday, 14 June 2014	
08:30–17:00	UN-Habitat/GLTN/FIG/YSN Training of Trainers for Social Tenure Domain Model (STDM) Use and Application – Day 2 Venue: PNB Darby Park • By invitation only
Sunday, 15 June 2014	
08:30–17:00	UN-Habitat/GLTN/FIG/YSN Training of Trainers for Social Tenure Domain Model (STDM) Use and Application – Day 3 Venue: PNB Darby Park • By invitation only
Monday, 16 June 2014	
08:30–17:00	UN-Habitat/GLTN/FIG/YSN Training of Trainers for Social Tenure Domain Model (STDM) Use and Application – Day 4 Venue: PNB Darby Park • By invitation only

2nd FIG Young Surveyors Conference 2014

And Associated Events at XXV FIG Congress

Programme Overview

Monday, 16 June 2014	
17:30–19:30	XXV FIG Congress Welcome Reception Venue: KLCC
19:30	Young Surveyors Walking Tour Departs Welcome Dinner for Saloma Theatre and Bistro • By invitation only
20:00	2nd FIG Young Surveyors Conference Welcome Dinner Venue: Saloma Theatre and Bistro A cultural dinner to welcome young surveyors to Kuala Lumpur! • By invitation only
Key	
KLCC	Kuala Lumpur Convention Centre
Impiana	Impiana Hotel Kuala Lumpur
PNB Darby Park	PNB Darby Park
GLTN	Global Land Tool Network, UN-Habitat
STDM	Social Tenure Domain Model

Tuesday, 17 June 2014	
09:00–09:30	Registration @ Impiana FIG Annual Commission Meetings as per Technical Programme
09:00–09:30	Welcome and Recognition of 2014 FIG Foundation Young Surveyor Fellows Venue: Impiana Banquet Hall 1 & 2 This session provides a brief welcome to the Young Surveyors Conference Stream of the XXV FIG Congress in Kuala Lumpur. The 2014 FIG Foundation Fellowship winners will also be presented. Kate Fairlie , Chair FIG YSN Eva-Maria Unger , Incoming Chair FIG YSN John Hohol , FIG Foundation
09:30–10:45	Surveying the 99%: Engaging the Need Venue: Impiana Banquet Hall 1 & 2 Chair: Kate Fairlie • Rapporteur: Eva-Maria Unger This session transports the logic of the Occupy Movement – which identifies the inequality of wealth in the world – to commence the Second Young Surveyors Conference with a discussion on three key questions. The first: <i>who are we surveying for?</i> The second: <i>what key needs are we addressing?</i> And the third, a provocation: <i>what technologies and knowledge will best meet these needs?</i> It sets the scene for the following discussion on <i>Fit-for-Purpose Land Administration</i> . Jack Makau , Slum/Shack Dwellers International, Kenya • Arnulf Christl , Open Source Geospatial Foundation • Chryssy Potsiou , FIG Vice-President • Diane Dumashie , Africa Task Force Chair
10:45–11:30	Tea/Coffee Break @ Impiana First Young Surveyor ice-breaker session!
11:30–13:00	Fit-for-purpose Land Administration: Debate and Discussion Venue: Impiana Banquet Hall 1 & 2 Chair: Paula Dijkstra • Rapporteur: Nur Zurairah Abdul Halim The FIG's most recent publication "Fit-for-purpose Land Administration" arises from cooperation with the World Bank to address the issue of building and sustaining land administration systems that are fit-for-purpose, rather than blindly implementing top-end technological solutions. This session presents an industry review and discussion of the document, to look at how it could be implemented, and what gaps or challenges may arise. Young surveyors in the audience are asked to consider: how will MY work link to this and/or be affected in the future? Robin McLaren , KnowEdge • Brent Jones , ESRI • Kevin Daugherty , Trimble • Chris Rizos , President, International Association of Geodesy
13:00–14:30	Lunch @ Impiana
14:30–16:00	Opening Ceremony @ KLCC
16:00–16:30	Tea/Coffee Break + Exhibition Opening @ KLCC
16:30–18:00	Plenary Session 1 @ KLCC
09:00–19:00	XXV FIG Congress Exhibition @ KLCC
18:00–20:00	Young Surveyors Networking Drinks • Venue: Cedar on 15 @ Impiana • By Invitation Only
20:00–23:00	Foundation Dinner @ KLCC • Ticketed Function

Wednesday, 18 June 2014			
08:00–09:00	Registration @ KLCC FIG Annual Commission Meetings as per Technical Programme		
09:00–10:45	FIG Plenary Session 2 @ KLCC		
10:45–11:30	Tea/Coffee Break @ Impiana		
11:30–13:00	<table border="0"> <tr> <td style="vertical-align: top;"> Workshop 1A: Surveying for Post-Disaster Recovery Venue: Impiana Banquet Hall 1 Chair: Rizqi Abdulharis Rapporteur: Melissa Robert Bringing examples from recent events in Haiti, the USA, New Zealand, Pakistan and the Philippines, this session answers: How can a young surveyor contribute to post-disaster recovery? </td> <td style="vertical-align: top;"> Workshop 1B: Laser Scanning Venue: Impiana Banquet Hall 2 Chair: Kelvin Tang Rapporteur: Yusuf Aro-Lambo Your chance to get up close and personal with the latest laser scanning technology. </td> </tr> </table>	Workshop 1A: Surveying for Post-Disaster Recovery Venue: Impiana Banquet Hall 1 Chair: Rizqi Abdulharis Rapporteur: Melissa Robert Bringing examples from recent events in Haiti, the USA, New Zealand, Pakistan and the Philippines, this session answers: How can a young surveyor contribute to post-disaster recovery?	Workshop 1B: Laser Scanning Venue: Impiana Banquet Hall 2 Chair: Kelvin Tang Rapporteur: Yusuf Aro-Lambo Your chance to get up close and personal with the latest laser scanning technology.
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13:00–14:30	Lunch @ Impiana Tonka Bean Cafe		
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16:00–16:30	Tea/Coffee Break @ Impiana		
16:30–18:00	<table border="0"> <tr> <td style="vertical-align: top;"> Workshop 3A: Young Surveyors and the Definition of Surveying? Devising an Action Plan for the Way Ahead Venue: Impiana Banquet Hall 1 Chair: Tom Champion Rapporteur: Benedicta Ugwulebo This session will report back on the recent Commission 1 event and ask young surveyors to think critically about positioning their profession for the future. </td> <td style="vertical-align: top;"> Workshop 3B: Young Surveyors Implementing Fit-for-purpose Venue: Impiana Banquet Hall 2 Chair: Paula Dijkstra Rapporteur: Asmae Azzoui This session will challenge young surveyors to draft their own questions, review and responses to the recent FIG Publication "Fit-for-Purpose Land Administration". </td> </tr> </table>	Workshop 3A: Young Surveyors and the Definition of Surveying? Devising an Action Plan for the Way Ahead Venue: Impiana Banquet Hall 1 Chair: Tom Champion Rapporteur: Benedicta Ugwulebo This session will report back on the recent Commission 1 event and ask young surveyors to think critically about positioning their profession for the future.	Workshop 3B: Young Surveyors Implementing Fit-for-purpose Venue: Impiana Banquet Hall 2 Chair: Paula Dijkstra Rapporteur: Asmae Azzoui This session will challenge young surveyors to draft their own questions, review and responses to the recent FIG Publication "Fit-for-Purpose Land Administration".
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09:00–19:00	XXV FIG Congress Exhibition • Venue: KLCC		
20:00–23:00	Commission Dinners (at own cost)		

Thursday, 19 June 2014			
08:00–09:00	Young Surveyor Open Sessions • Venue: KLCC A series of informal and impromptu sessions will be hosted during the Thursday and Friday 08:00 – 09:00 time slots. Session topics and locations will be posted on the Young Surveyor Notice Board and on the Young Surveyor Facebook page. Sessions can be proposed and hosted by anyone – but you must have a minimum number signed up to your session! Example sessions include: "Review my CV", "A coaching approach to expanding your survey career" and "How to set up a local network of young surveyors".		
09:00–10:45	FIG Plenary Session 3 @ KLCC		
10:45–11:30	Coffee Break @ Impiana		
11:30–13:00	<table border="0"> <tr> <td style="vertical-align: top;"> Workshop 4A: Surveying Education – Are We Meeting the Needs of the Present and Future? Venue: Impiana Banquet Hall 1 Chair: Emily Tidey • Rapporteur: Odil Akbarov Three short presentations will provoke the audience to discuss new educational paradigms to meet the needs of the future survey profession. Participants will draft a statement and plan of action from this event. </td> <td style="vertical-align: top;"> Workshop 4B: Can we value informal settlements? Venue: Impiana Banquet Hall 2 Chair: Chandan Das • Rapporteur: Donmarl Camua This session will look at recent work, and invite discussion on the issue of valuing settlements outside the formal land sector. </td> </tr> </table>	Workshop 4A: Surveying Education – Are We Meeting the Needs of the Present and Future? Venue: Impiana Banquet Hall 1 Chair: Emily Tidey • Rapporteur: Odil Akbarov Three short presentations will provoke the audience to discuss new educational paradigms to meet the needs of the future survey profession. Participants will draft a statement and plan of action from this event.	Workshop 4B: Can we value informal settlements? Venue: Impiana Banquet Hall 2 Chair: Chandan Das • Rapporteur: Donmarl Camua This session will look at recent work, and invite discussion on the issue of valuing settlements outside the formal land sector.
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16:00–16:30	Afternoon Tea @ Impiana		
16:30–17:30	Surveying and the Global Agenda: Young Surveyors Role • Venue: Impiana Banquet Hall 1 & 2 Chair: Nur Zurairah Abdul Halim • Rapporteur: Pamela Ibukunle This session provides a broad, global overview of the surveying profession. It will inspire attendees to think of their actions within the global context. It will provoke discussion on how young surveyors can position the profession in the future. Greg Scott UN-GGIM • Danilo Antoniou UN-Habitat GLTN • Paul Munro-Faure , FAO • Kate Fairlie , Chair, FIG Young Surveyors Network		
17:30–18:00	Closing Remarks: Young Surveyor Open Mic and Tweet-off • Venue: Impiana Banquet Hall 1 & 2 A quick re-cap of the previous days, a review of the best tweets and photos – with prizes for the winner! Eva-Maria Unger , FIG YSN Chair 2015–2018, will present the closing remarks		
09:00–19:00	XXV FIG Congress Exhibition @ KLCC		
20:00–23:00	Gala Dinner • Venue: Grand Ballroom, Mandarin Oriental Hotel Kuala Lumpur		
Friday, 20 June 2014			
08:00–09:00	Young Surveyor Open Sessions • Venue: KLCC A series of informal and impromptu sessions will be hosted during the Thursday and Friday 8:00–9:00 time slots. Session topics and locations will be posted on the Young Surveyor Notice Board and on the Young Surveyor Facebook page. Sessions can be proposed and hosted by anyone – but you must have a minimum number signed up to your session! Example sessions include: "Review my CV", "A coaching approach to expanding your survey career" and "How to set up a local network of young surveyors".		
09:00–18:00	Existing FIG Programme		
09:00–17:30	YS Asia-Pacific Meeting • Venue: Impiana Jasmine Room • By Invitation Only Following the success of Young Surveyor Meetings in Europe and North America, this day is dedicated to the needs of young surveyors from the Asia and Pacific regions. As attendance is limited, young surveyors from the region will be contacted to register separately. Expressions of interest or questions should be directed to Donmarl Camua, donmarl.camua@gmail.com.		


















Exhibition

A comprehensive exhibition will run concurrently with the FIG Congress, from 17–19 June 2014 at the Kuala Lumpur Convention Centre, Level 3 (Ballrooms 1 and 2), see floor plans on page 15. This exhibition will showcase the latest and best in surveying and spatial products and services and will be the largest of its kind in the Asia-Pacific Region in 2014.

Bunga Raya Platform

A platform within the exhibition allocated for technical/product presentation and briefing or launching. The exhibitors will be sharing information of interest to the surveying community.

Timetable of Events at Bunga Raya Platform

Time	Tuesday, 17 June	Wednesday, 18 June	Thursday, 19 June
10:00–10:45	 KQ GEO Technologies	 Leica	 Esri
11:00–11:45	 Leica	 Sensefly	 Sensefly
12:00–12:45	 Esri	 Esri	 Supergeo Technologies Inc.
13:00–13:45	 Trimble	 Trimble	 Trimble
14:00–14:45	 Topcon	 Topcon	 Computer Graphics Network
15:00–15:45		 Intermap	
16:00–16:45	 HERE		

Opening Hours

Tuesday, 17 June	9:00–19:00
Wednesday, 18 June	9:00–19:00
Thursday, 19 June	9:00–16:30

After the Opening Ceremony of the Congress on Tuesday 17 June at 16:00, the Honourable Dato' Sri **Mohd Najib bin Tun Haji Abdul Razak**, Prime Minister of Malaysia, will officially open the exhibition by cutting the ribbon and visit the Platinum Sponsors.

For up-to-date information about the exhibition, please visit www.fig.net/fig2014/Exhibitors.htm.

Exhibitors

Booth	Company	Booth	Company
32	RIEGL Laser Measurement Systems GmbH	77	TL Geohydrographics Sdn Bhd
33	Panasonic Toughbook	79, 104	KQ GEO Technologies Co., Ltd
34	THS Geoscience Sdn Bhd	80	RUIDE & SANDING
35	GLTN & UN-Habitat	81	Strong JP International Sdn Bhd
36	Supergeo Technologies Inc.	83	senseFly
37	RD-Palmer (M) Sdn Bnd	84	Surmap Sdn Bhd
38, 43	Thomson Reuters	85	Henry Butcher Malaysia
39–42	ESRI	86	Wuhan Visiontek Inc.
44	MALÁ Geoscience South East Asia	88	Optech
45–46, 51–52	Leica Geosystems	89	ACA Pacific Technology (M)
53, 78	Airbus Defence and Space	90–91	Map Information Solutions Snd Bhd
47–50	Trimble	92	AAM
54	IDS Corporation	93	Pusat Infrastruktur Data Geospasial Negara (MaCGDI)
55	RDG Supply Sdn Bhd	94	CHC
56	Hurricane Geo Inspection Survey Sdn Bhd	95	RICS – Royal Institution of Chartered Surveyors
57–58	E. J. Motiwalla	87, 96	Imagemaps
60	DroneMetrex	97	University of Melbourne
61	ComNav Technology Ltd.	99	FIG2014 Merchandise
62	Wawatech Sdn Bhd	100	Chamber of Surveying Cadastre Engineers of Turkey
64	RS&GIS	101	MAKLI & MIL, Finnish Member Associations
65	TSKAY Technologies Sdn Bhd	102a	FIG Working Week 2016
66	Jiangsu Precise Way Optics Co., Ltd	102b	FIG Working Week 2015
68–69	Intermap Technologies	103a	FIG
70	Hemisphere GNSS, Inc.	103b	Computer Graphics Network
71	HERE	105–106, 111–112	Topcon Malaysia
73	Department of Survey and Mapping Malaysia (JUPEM)		
74	Altus Positioning System – Datascrip		
75	PIX4D		
76	Asian GEOS		



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Congress Web Site

www.fig.net/fig2014

Conference Proceedings

www.fig.net/pub/fig2014

Forthcoming Events

FIG Working Week 2015

17–21 May 2015
Sofia, Bulgaria
www.fig.net/fig2015

FIG Working Week 2016

2–6 May 2016
Christchurch, New Zealand
www.fig.net/fig2016





FIG Working Week Sofia 2015

17 - 21 May, Bulgaria

From the wisdom of the ages
to the challenges of modern world

www.fig.net/fig2015

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Geodesy, Cartography and Cadastre Agency
Union of Surveyors and Land Managers in Bulgaria
Association of Topographical Companies

FIG  **CHAMBER OF GRADUATED SURVEYORS**