FIG Working Week 2012
Rome, Italy 6–10 May 2012

Knowing to
Manage the territory
Protect the environment
Evaluate the cultural heritage

Technical Program

Organized by:
INTERNATIONAL FEDERATION OF SURVEYORS
CONSIGLIO NAZIONALE GEOMETRI E GEOMETRI LAUREATI

Platinum Sponsors:
esri
Trimble
### Program at a Glance

#### Technical Tours:
- **TT 1 – Land Agency – Office dell’Agenzia del Territorio**
  - Monday 7 May, 9:00–12:00
- **TT 2 – Land Agency – Office dell’Agenzia del Territorio**
  - Wednesday 9 May, 9:00–12:00
- **TT 3 – Geoweb**
  - Tuesday 8 May, 13:30–17:00
- **TT 4 – Geoweb**
  - Wednesday 9 May, 9:00–12:00
- **TT5 – FAO – Disaster Risk Management and Land Tenure**
  - Tuesday 8 May, 13:30–18:30

#### FIG and CNGeGL Offices:
- Registration (Level –1)
- President: Roma (Level 0)
- CNGeGL President:
  - Tevere (Level 0)
- Speakers Preparation Room:
  - SR (Level –1)
- Meeting rooms:
  - MIR1, MIR2 and S.Stefano (Level –1)
- Conference Doctor:
  - DR (Level –1)

#### History Workshop:
- 4 May:
  - Fondazione dei Geometri Italiani, via Cavour 179/A

#### Rooms for the Commission Annual Meetings:
- Sunday 6 May:
  - Comm 1 Pisa, Comm 6 S. Giorgio
  - Comm 2 Malta, Comm 7 Caravaggio
  - Comm 3 Rodi, Comm 8 S. Stefano
  - Comm 4 Raffaello, Comm 9 S. Marco
  - Comm 5 S. Giovanni, Comm 10 Bernini

#### First FIG Young Surveyors Conference 4–5 May:
- Cassa Italiana di Previdenza e Assistenza Geometri, 4, Lungo Tevere Amaldo Da Brescia

#### FIG Commission S/IAG/ICG Workshop 4–5 May:
- Cassa Italiana di Previdenza e Assistenza Geometri, 4, Lungo Tevere Amaldo Da Brescia

#### History Workshop 4 May:
- Fondazione dei Geometri Italiani, Via Cavour 179/A

### Monday 10:30–17:30

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<th>Tuesday 8 May</th>
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<td>Opening Ceremony and concert</td>
<td>Foundation Dinner and concert</td>
<td>Conference Dinner</td>
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#### Exhibition:
- **Tuesday 9:00–17:30**
- **Wednesday 9:00–16:00**
The FIG Working Week 2012

Technical Program

Sunday, 6 May 2012

**FIG General Assembly – First Session**
Sunday, 6 May 09:00–12:00
Venue: Cavalieri 3&4, Rome Cavalieri
Commission: FIG members
Chair: Mr. CheeHai Teo, FIG President
- For all FIG members.
- Open for observers.

**FIG General Assembly – First Session – cont.**
Sunday, 6 May 13:00–15:00
Venue: Cavalieri 3&4, Rome Cavalieri
Commission: FIG members
Chair: Mr. CheeHai Teo, FIG President
- For all FIG members.
- Open for observers.

**FIG Presidents Coffee**
Sunday, 6 May 15:00–16:00
Venue: Sala Belle Arti, Rome Cavalieri
Commission: Presidents of FIG members
- This is an informal gathering for presidents and head of delegations of FIG member associations.
- By invitation only.

**FIG Commission Meetings**
Sunday, 6 May 16:00–18:00
Venue: See list for Commissions, Rome Cavalieri
Commission: FIG Commission delegates

Meetings in following rooms:
- Commission 1: Pisa
- Commission 2: Malta
- Commission 3: Rodi
- Commission 4: Raffaello
- Commission 5: S. Giovanni
- Commission 6: S. Giorgio
- Commission 7: Caravaggio
- Commission 8: S. Stefano
- Commission 9: S. Marco
- Commission 10: Bernini

Monday, 7 May 2012

**FIG Africa Task Force – Breakfast Meeting**
Monday, 7 May 08:00–09:00
Venue: S. Stefano, Rome Cavalieri
Commission: FIG Africa Task
Chair: Dr. Diane Dumashie, Chair, FIG Africa Task Force, United Kingdom

**FAO – Implementing Land and Property Taxes**
Monday, 7 May 09:00–10:30
Venue: Ellipse, Rome Cavalieri
Commission: FAO, FIG and 9 Co-chairs: Dr. Paul Munro-Faure, FAO and Dr. Frances Plimmer, Chair, FIG Commission 9, United Kingdom

Paul Munro-Faure, FAO and Frances Plimmer, FIG Commission 9:
Opening remarks

Alexander I. Okunev and Galina L. Smolina (Russia):
Introduction of a tax on Real Estate in Russia, and the Computer assisted Mass Appraisal System Developed under the Cadastre Development Project

Niño Raymond B. Alvina (Philippines):
Comprehensive Development of Valuation and Property Taxation under the Land Administration and Management Programme

Nashilongo Shivute (Namibia):
Namibia Commercial Farmland Tax implemented with support from FAO

Mehmet Cesur (Turkey):
Development of Valuation in Turkey under the Land Registry and Cadastre Modernization Project

Questions and discussion and wrap up.
Monday, 7 May 2012 09:00–10:30


Monday, 7 May 09:00–10:30
Venue: Cavalieri 3, Rome Cavalieri Commission: 6
Chair: Mr. Mara Morbin, Italy
Rapporteur: Ms. Leonie Newnham, Chair, FIG Commission 1, Australia

Brian Coutts (New Zealand) and Malcolm McCoy (Australia): Towards 2020 – Critical Developments in Land Surveying in 60 Years (5742)

Vincent Thomas and Matthieu Bach (Canada): Times are Changing: How New Technologies Diversify the Role of the Surveyor (6023)

Pierpaolo Bonfanti: The Surveyor (5023)

Nic Donnelly (New Zealand): Progress Towards a Nationwide Adjustment of New Zealand’s Geodetic Data (5775)

Rob Sarib and Amy Peterson (Australia): A New Geodetic Datum for the Northern Territory – Australia (5804)

Gian Gherardo Calini and Reinhard Blasi (Belgium): EGNOS and Precision Applications: GIS-Mapping and Precision Agriculture (6254)

Crystiana Aiuti (Italy): A Concrete Experience for Students on Social Responsibilities and Caring of Disabled (6203)

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**TS01B – Geodetic Datum I**

Monday, 7 May 09:00–10:30
Venue: Cavalieri 3, Rome Cavalieri Commission: 5
Chair: Mr. Mikael Lilje, Chair, FIG Commission 5, Sweden
Rapporteur: Mr. Lars Engberg, Sweden

Ruth Neilan (USA), Urs Hugentobler (Germany) and Chris Rizos (Australia): The IGS in the Service of Science and Society: New Roles, New Challenges and New Products (5934)

Nic Donnelly (New Zealand): Progress Towards a Nationwide Adjustment of New Zealand’s Geodetic Data (5775)

Rob Sarib and Amy Peterson (Australia): A New Geodetic Datum for the Northern Territory – Australia (5804)

Gian Gherardo Calini and Reinhard Blasi (Belgium): EGNOS and Precision Applications: GIS-Mapping and Precision Agriculture (6254)

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**TS01C – Construction Economics and Management I**

Monday, 7 May 09:00–10:30
Venue: Caravaggio, Rome Cavalieri Commission: 10
Chair: Mr. Robert Šinkner, Chair, FIG Commission 10, Czech Republic
Rapporteur: Mr. Andrea Massaro, Italy

Chan KH (Hong Kong SAR, China): Critical Factors in Contract Management (5574)

Franco Mazzoccoli (Italy): Designing/Building/Living: “The Building Organism” (6108)

Tzenia Y C Wong (Hong Kong SAR, China): Adaptation of Web-based Document Management Systems as Project Management Tools in the Construction Industry in Hong Kong (5393)

Borvorn Israngkura Na Ayudhya (Thailand): Factors Causing Delay in Payment of Residential Building Projects in Thailand (5480)

This is a peer reviewed paper.

Oluwemi Oyedele (Nigeria): The Challenges of Infrastructure Development in Democratic Governance (6119)

Anita Sidelska (Latvia): Heat Insulation of Dwelling Houses (5947)

This is a flash presentation.

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**TS01D – Spatial Data Infrastructure**

Monday, 7 May 09:00–10:30
Venue: Caravaggio, Rome Cavalieri Commission: 3
Chair: Prof. Hartmut Mueller, Germany
Rapporteur: Ms. Paola Ronzino, Italy

Christian Hickel and Jörg Blankenbach (Germany): From Local SDI to E-Governance – Case Study in Municipalities in the South of Hesse (5553)

This is a peer reviewed paper.

Ulrike Klein and Hartmut Mueller (Germany): Humans and Environment: Cause and Effect Analysis Supported by Spatial Data Infrastructures (5585)

This is a peer reviewed paper.

Lars Erik Storgaard (Denmark): INSPIRE in Denmark and Its Impact on the Danish eGovernment (5670)

Murat Meha, Muzaffer Caka (Kosovo), Sonja Jazo (Albania) and Bashkim Idrizi (Macedonia, FYROM): Address Register in the Perspective of NSDI (5933)

Vlado Cetcl, Darko Sisko and Veselic-Bruvo Jadranka (Croatia): Local Spatial Data Infrastructure as a Service for Efficient Spatial Management (6086)

Sergey Sapelnikov (Russia): SDI Development in the Russian Federation (6159)

Sedat Bakici, Akin Kisa and Bilal Erkek (Turkey): National Spatial Data Infrastructure (NSDI) Feasibility Study and Apparent Risks in Turkey (5788)

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**TS01E – Pro Poor Land Management**

Monday, 7 May 09:00–10:30
Venue: Rodi, Rome Cavalieri Commission: 7
Chair: Mr. Christiaan Lemmen, Netherlands
Rapporteur: Mr. Jean-François Beaupré, Canada

Georgina Rockson (Ghana), Rohan Bennett and Liza Groenendijk (Netherlands): Land Administration for Food Security (5547)

Claire Galpin (France): Decentralized Land Management (5972)

Lazarus Ojigi (Nigeria): Cadastral Information and Adherence to Statutory Conditions in Right of Occupancy vis-à-vis Development Control in Minna, Nigeria (5577)

This is a peer reviewed paper.

Geoff Hay, Tom Clark and G. Brent Hall (New Zealand): The OSCAR Project: Progress in the Development of a Generic Land Administration Application (5740)

This paper has been presented by Brent Hall

Juliana Opoku Nyarko (Ghana): Managing Pro-Urban Land Development: Building on Pro-Poor Land Management Principles (5673)

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**TS01F – Dam and Reservoir Engineering Surveying**

Monday, 7 May 09:00–10:30
Venue: Malta, Rome Cavalieri Commission: 6
Chair: Dr. Eugene McGovern, Ireland
Rapporteur: Dr. Craig Hancock, United Kingdom

Aris Sunanty, Suryoleono Kabul Bashah, Djawahir Fakhruzzari, Addin Swastana and Adityo Susilo (Indonesia): Design and Installation for Dam Monitoring Using Multi Sensors: A Case Study at Sermo Dam, Yogyakarta Province, Indonesia (5572)

Maria Henriques, José Lima and Sérgio Oliveira (Portugal): Measuring Inclinations in Cabril Dam with an Optoelectronic Sensor (5507)

This is a peer reviewed paper.

Bachir Gourine, Habib Mahi, Amar Khoudiri and Youcef Lakarsi (Algeria): The GRNN and the RBF Neural Networks for 2D Displacement Field Modeling – Case Study: GPS Ascultaion Network of LNG Reservoir (GL4Z) industrial Complex – Arzew, Algeria (5684)

Seyfullah Demirkaya and Muhammet Balcilar (Turkey): The Contribution of Soft Computing Techniques for the Interpretation of Dam Deformation (5866)

Marco Di Mauro (Italy) and Joel Van Cranendonck (Belgium): Geodetic and Geotechnical Data Mutual Offsetting Monitoring Systems (5505)

Riccardo Barzaghi, Livio Pinto and Riccardo Monaci (Italy): The Monitoring of Gravity Dams: Two Tests in Sardinia, Italy (6130)

This is a flash presentation.

Artur Adamek, Janina Zaczek-Plensinska and Klaudia Gergont (Poland): Analysis of Possibilities to Utilise Results of Laser Scanning in Technical Inspection of Water Dams (6060)

This is a flash presentation.
Monday, 7 May 2012 09:00–10:30 (continued)

TS01G – Group Land Rights
Monday, 7 May 09:00–10:30
Venue: Bernini, Rome Cavalieri
Chair: Prof. Jaap Zevenbergen, Netherlands
Rapporteur: Mr. Soren F. Christensen, Denmark

Douglas Black (Mozambique): An Innovative Approach to Land Governance—Moving Beyond Word Processors to a Logistical Oriented Implementation Strategy (5352)

Song Zhao (China, PR): Study on the Economic Relations in Property Right under the New Collective Land Rights Frame (6174)

Dong Jiang and Zhiling Huang (China, PR): Business Development of China Cadastral Management (6177)

Aune Rummuainen (Finland): Natural Livelihood Real Estates in Finland (5460)

Tarun Ghawana (India), Joao Hespanha (Portugal) and Jaap Zevenbergen (Netherlands): Application of Land Administration Domain Model to Recognition of Indigenous Community Rights in Indian Forests – Indian Forest Rights Act, 2006, examined with its Spatial Extension (5562)

This paper has been presented by Prof. Jaap Zevenbergen, Netherlands.

This is a peer reviewed paper.

Andri Hernandi, Riziqi Abdulharis, Sadikin Hendriatningsih and Marisa Mei Ling (Indonesia): An Institutional Analysis of Customary Marine Tenure in Maluku: Towards Implementation Marine Cadastre in Indonesia (5797)

Rizqi Abdulharis (Indonesia): Spatial Unit Administration Concept and Its Impact to Indigenous Communities in Ambon Lease Region, Indonesia (6039)

TS01H – Francophone Session I
Monday, 7 May 09:00–10:30
Venue: Pisa, Rome Cavalieri
Commission: 7 and 4

Word Processors to a logistical domain model to recognize and Its Impact to Indigenous
Appreciation (5836)


Léopold Degbegnon (Benin): Stakes and Perspective of Network Geodesique Beninois with the Installation of the Permanent Stations – Enjeux et perspectives du réseau géodésique Beninois avec la mise en place des stations permanentes (6183)

Fabio Pinna (Italy): Landscape Planning and Its Influence over Property Management and Renovation (5979)

Emanuele Bossini (Italy): Landscape Identity Resources (6194)

Sukran Valipar, Asli Bozdag and Saban Inam (Turkey): Determine of Regional Development Strategies in Izmir (5982)

Bahadir Unver, Esin Bitik and Durun Zafer Seker (Turkey): A GIS Based Urban Transformation Project in Istanbul, Turkey (6076)


TS01I – FIG Africa Task Force – Roundtable Discussion
Monday, 7 May 09:00–10:30
Venue: S. Giorgio, Rome Cavalieri
Commission: FIG ATF
Chair: Dr. Diane Dumashie, FIG Africa Task Force, United Kingdom

Discussions:
– Diane Dumashie, Chair, FIG Africa Task Force (United Kingdom)
– Kevin Muonga, Cape Peninsula University of Technology (Ugannda)
– Yvonne Souah, Past President GNIS & AFRES (Ghana)
– Emmanuel Tembo, University of Botswana (Botswana)
– Eskedar Endashaw (Ethiopia)
– Diane Dumashie (United Kingdom)

TS01J – Master and Regional Planning
Monday, 7 May 09:00–10:30
Venue: Raphaelo, Rome Cavalieri
Commission: 8
Chair: Dr. Frank Friesecce, Germany
Rapporteur: Mr. Kwame Tenadu, Ghana

Perceptions of Tenure Security in Camalig Municipality in the Philippines (5530)

This is a peer reviewed paper.


Juhana Hiironen and Kirsiikka Nuikkanen (Finland): Land Consolidation and Its Effect on Climate (5555)

This is a peer reviewed paper.

TS01K – Climate Change and Environment
Monday, 7 May 09:00–10:30
Venue: Leonardo, Rome Cavalieri
Commission: 7
Chair: Dr. David Mitchell, Australia
Rapporteur: Ms. Elisabetta Genovese, France

Xavier Prigent (France): The Green and Blue Network, a New Way of Thinking the Environment (5702)

Manfred Bottmeyer, Johannes Riedel and Hilde Rotering-Vuong (Germany): The Ecological Land Management of the Ruhr Regional Association VR – A New Path to the Preservation of Open Spaces (5525)

Muhibuddin Usamah (Indonesia), David Mitchell and John Handmer (Australia): Perceptions of Tenure Security in Camalig Municipality in the Philippines (5530)

This is a peer reviewed paper.

Hakan Akcin, Eray Can, Husein Kemaldere and Senol Kuscu (Turkey): Temporal Investigation of Effects on Coastal Structures of Subsidence Caused by Undersea Mining in Zonguldak Hardgoal Basin Using InSAR and GNSS Approach (5948)

Monday 11:00–12:30

PS1 – Plenary Session 1 – Knowledge to Manage
Monday, 7 May 11:00–12:30
Venue: Cavalieri 4, Rome Cavalieri
Chair: Dr. CheeHai Teo, FIG President, Malaysia
Rapporteur: Geom. Fausto Savoldi, CNGeGL President, Italy


Stefania Prestigiaco, Minister for Environment and Protection of Land and Sea, 2008–2011 (Italy): Special Projects Studied by the Environmental Commission of the Parliament (6240)

Franco Maggio, Director, Agenzia del Territorio (Italy): The Italian Cadastre and the Real Estate Taxation (6241)

The Italian Cadastre and the Real Estate Taxation (6241)
Monday, 7 May 2012 14:00–15:30

FAO – Partnerships to Implement the FAO Voluntary Guidelines

Monday, 7 May 14:00–15:30
Venue: Cavalieri 3, Rome Cavaliere
Commission: FIG, FAO and 7
Moderator: Dr. Babette Wehrmann, FAO
Rapporteur: Mr. Daniel Roberge, Chair, FIG Commission 7, Canada

CheeHai Teo, FIG President, (Malaysia): FIG’s Role in Promoting and Supporting Responsible Governance of Tenure, Land, Fisheries and Forests

Tanja Pickardt, Sector Project Land Policy, GIZ (Germany): Responsible Governance of Tenure – Good Practices from around the World

Nashilongo Shivute, Under-secretary, Ministry of Lands and Resettlement (Namibia): What a Government Can Do to Improve Governance of Tenure – Lessons Learnt from Namibia

Philip Seufert, FIAN (Germany): Monitoring Responsible Governance of Tenure – Expectations and Recommendations from Civil Society

Mike Taylor, Program Manager, International Land Coalition, ILC (Italy): Monitoring Responsible Governance of Tenure – the Land Matrix

Discussion: How Can Surveyors Contribute to Achieve Responsible Governance of Tenure?

Babette Wehrmann, FAO: Summary of the Discussion and Closing

TS02B – Geodetic Datum II
Monday, 7 May 14:00–15:30
Venue: Cavalieri 3, Rome Cavaliere
Commission: FIG
Chair: Dr. David Martin, France
Rapporteur: Dr. Don Grant, New Zealand

Neil Weston, Tomás Soler and Dan Roman (USA): Recently Adopted Changes to the Terrestrial Reference Frames Used in the United States (5679)

Simon Chi Wo Kwok (Hong Kong SAR, China): Coordinate Systems for Surveying and Mapping in Hong Kong (6113)

Vladimir A. Sereodovich (Russia), Raphael Ehigiator-Iruhge and Mabel Ehigiator (Nigeria): Utilization of IGS/ ITRF in Nigeria BM, AMOS Geodetic Station a Case Study (5496)

Kevin M. Kelly (USA): Towards Implementing Dynamic Datum Data Management in GIS (5643)

Richard Stanaway, Craig Roberts (Australia), Graeme Blick and Chris Cook (New Zealand): Four Dimensional Deformation Modelling, the Link between International, Regional and Local Reference Frames (5906)

TS02C – Construction Economics and Management II
Monday, 7 May 14:00–15:30
Venue: Caravaggio, Rome Cavaliere
Commission: 10
Chair: Mr. Robert Sinkner, Chair, FIG Commission 10, Czech Republic
Rapporteur: Ms. Tzena Y. C. Wong, Hong Kong SAR, China

Juergen Schweitzer, Vitali Kochkine, Volker Schwieger and Fritz Berner (Germany): Quality Assurance in Building Construction, based on Engineering Geodesy Processes (5927)

Andrea Massaro (Italy): The Construction Activities for the Protection of Cultural Heritage and Landscape (6103)

Vladimira Zufanova (Czech Republic): Project Management in the State Sector (6045)


Krisha Mochtar (Indonesia): Marketing Expenses of Indonesian Contractors (5478)

This is a peer reviewed paper.

TS02D – Customary and Group Land Rights
Monday, 7 May 14:00–15:30
Venue: S. Giovanni, Rome Cavaliere
Commission: 7
Chair: Ms. Claire Galpin, France
Rapporteur: Mr. Nicolas Colas, Haiti

Felician Komu (Tanzania): Land Management at Crossroads in Africa: Impact of the Village Land Act No. 3 of 1999 on Informal Land Management and Fate of the Customary Land Tenure (5770)

Daniel Weldegebriel Ambaye (Ethiopia): Land Rights in Ethiopia (5521)

This is a peer reviewed paper.

Ephraim Danso and Michael Barry (Canada): Land Tenure Administration in Peri-Urban Accra: A Study of Bortinor (5739)

TS02E – Land Consolidation
Monday, 7 May 14:00–15:30
Venue: Rodi, Rome Cavaliere
Commission: 7
Chair: Mr. Danilo Antonio, UN-Habitat
Rapporteur: Mr. Eric Thalgott, France

Alexander Sagaydak and Anna Lukyanichkova (Russia): New Trends in Development of Agricultural Land Market in Russia (5646)

N. Enver Ugur and Tayfun Cay (Turkey): An Assessment about Land Consolidation in Turkey (5677)

Seija Kotilainen and Kalle Kontinen (Finland): Land Arrangements and Water Protection Activities in Finland – Conclusions of a Development Project (5745)

Velta Parsova and Edvins Kapostins (Latvia): Does Land Consolidation Fit Everywhere? (5795)

Anka Lisic (Slovenia), Hans Sevadtal, Øystein Jakob Bjerva (Norway) and Miran Ferlan (Slovenia): The Institutional Framework of Land Consolidation – Comparative Analysis between Slovenia and Norway (5823)

Frederik Rosman (Netherlands): Automated Parcel Boundary Design Systems in Land Consolidation (5924)

Christiaan Lemmen, Louisa Jansen and Freek Rosman (Netherlands): Informational and computational approaches to Land Consolidation (6049)

TS02F – Engineering Surveying – Photogrammetry
Monday, 7 May 14:00–15:30
Venue: Malta, Rome Cavaliere
Commission: 6
Chair: Mr. Marco Di Mauro, Italy
Rapporteur: Dr. Alain De Wulf, Belgium

Xiaojuan Qi and Derek Lichiti (Canada): Monitoring Dynamic Concrete Beam Deformation with Range Cameras (5843)

Lubomir Soukup, Jan Havrillant, Ondrej Bohm and Milan Talich (Czech Republic): Elastic Conformal Transformation of Digital Images (5765)

Ioanna Chounta and Charalabos Ioannidis (Greece): High Accuracy Deformation Monitoring of a Concrete Beam Using Automatic Photogrammetric Techniques (5522)

Pinar Karakus (Turkey): Evaluation of Distortion Error with Fuzzy Logic (5976)

This is a flash presentation.

Shijun Ding, Weiping Jiang and Zhijuan Shen (China, PR): Models and Algorithms of Linear Regression Based on Total Least Squares (6212)

This is a flash presentation.

This is a peer reviewed paper.

This is a flash presentation.
Monday, 7 May 2012 14:00–15:30 (continued)

TS02G – Land Markets
Monday, 7 May 14:00–15:30
Venue: Bernini, Rome Cavalieri Commission: 9
Chair: Ms. Olviera Vasovic, Serbia
Rapporteur: Dr. Frances Pimmer, Chair, FIG Commission 9, United Kingdom
Frances Pimmer and William McCluskey (United Kingdom): When is a Land Market not a Land Market? (6154)
Song Zhao (China, PR): Study on Urban Land Price of Various Usage (6182)
Oliveva Vasovic, Zagorka Gosvapic and Goran Cirovic (Serbia): Institutional Framework for Development of Real Estate Market in the Republic of Serbia (5541)
This is a peer reviewed paper.
Stojanka Branković and Nenad Tesla (Serbia): Real Estate Appraisal and Implications to the Real Estate Cadastre in the Republic of Serbia (5870)
Alexandra Weitkamp and Hamza Alkhati (Germany): The Bayesian Approach in the Valuation – A Strategy to Handle Markets with Low Purchasing Prices? (5813)
Ayhan Goktepe and Mehmet Ertas (Turkey): The Use of Rent Capitalisations in Real Estate Valuation in Areas with High Building Densities (5615)
Oksana Sukhova (Ukraine): Peculiarities of Restrictions on Land Market Development in Ukraine (5760)

TS02H – Technical Aspects of Spatial Information I
Monday, 7 May 14:00–15:30
Venue: Pisa, Rome Cavalieri Commission: 3
Chair: Mr. Rafic Khouri, France
Rapporteur: Mr. Daniele Brancato, Italy
Tcha Ahn and DekKie Tcha (Republic of Korea): The Practical Applications of Mini UAV in Cadastral Domain (5573)
Chengxi Bernad Siwe and Alias Abdul Rahman (Malaysia): Compression Techniques for 3D SDI (5579)
This is a peer reviewed paper.
Abdellkader El Garouani, Rachid Barry and Abderrahim Lahrach (Morocco): Implementation Scenario of the Urban GIS of Fez, Morocco (5783)
This is a flash presentation.
TS02I – State Land Management
Monday, 7 May 14:00–15:30
Venue: S. Giorgio, Rome Cavalieri Commission: 7
Chair: Dr. Richard Grover, United Kingdom
Rapporteur: Mr. Ari Teli, Finland
Elzbieta Bielecka (Poland): Spatial Objects in the Domain Model of the Public Real Estate Administration System – Case Study of the Geographic Information System for the Police’s Real Estate Administration (5807)
András Osskó (Hungary): Public State Land Management in Hungary (5824)
Dorota Latos, Marcin Latos, Marcin Galuszkiwicz and Pawel Kaminski (Poland): Verification of Data in GIS Management System for State Real Estate (6063)
This is a flash presentation.

TS02J – Planning Policies and Procedures I
Monday, 7 May 14:00–15:30
Venue: Raffaello, Rome Cavalieri Commission: 8
Chair: Mr. Sandy Rendel, Australia
Rapporteur: Ms. Eunice Macharia, Kenya
Louisa J.M. Jansen (Netherlands), Tijana Zivanovic (Serbia), Judith Borsboom-van Beurden (Netherlands), Siniša Trkulja (Serbia), Theo Overduin (Netherlands), Ljiljana Zivkovic and Aleksandar Djordjevic (Serbia): Improving Spatial Planning by Developing an Indicator-based Monitoring System in the Republic of Serbia (6062)
Yumei Cai, Ping Gao, Jing Wang and Rong Liao (China, PR): To Analyze the Factors of Influencing National Spatial Planning System Model and Form Chinese Spatial Planning System (6176)
Sandy Rendel (Australia): Interpreting Easements and Other Registered Dealings under the Torrens System of Title Following the Decision of the High Court of Australia in Westfield v Perpetual Trustee, the Ongoing Dilemma for Those Involved in Real Estate Development (5711)

TS02K – Surveying History
Monday, 7 May 14:00–15:30
Venue: Leonardo, Rome Cavalieri Commission: 10
Chair: Mr. John Brock, Australia
Rapporteur: Mr. Alan Wright, United Kingdom
Ibrahim Yilmaz (Turkey): The Kitab-i Bahriye “Book of Navigation” of Piri Reis (5687)
Paula Santos and Ana Roque (Portugal): Geodetic Field Operations for Cartography: An Overview over the First Portuguese Geodetic Mission in the Colonial Territories (1907–1910) (5816)
Almin Dapo, Bosko Pribivcic and Luka Babic (Croatia): A Time Section Review of Development of the City of Karlovac through 3D Modeling of Historical Maps (6029)
Dabib Bartoněk (Czech Republic): Prediction Model to Identify the Significant Development Periods of Historical Objects (5537)
Sinisa Delchev, Vukan Ogrizovic and Jelena Gucevic (Serbia): Historical Review of Measurements Using Invar Wires in Serbia (5546)
This is a peer reviewed paper.

TS02L – Cultural Diversity of Work and the Surveying Professional
Monday, 7 May 14:00–15:30
Venue: Ellisse, Rome Cavalieri Commission: 1, 2 and Young Surveyors
Chair: Ms. Benedicte Ugwuoble, Nigeria
Rapporteur: Ms. Eva-Maria Unger, Austria
Cecilia Lindén (Sweden): Age Structural Survey – How Is the Profession Doing? (5549)
Robyn Mccutcheon (Australia): A Report into the Status of Women in the Spatial Industry in Australia and New Zealand (5879)
Samu Mantere (Finland): Experiences of Civil Servant Exchange in the Netherlands during Autumn 2011 (5819)

TS02M – Cartography and Mapping Solutions
Monday, 7 May 14:00–15:30
Venue: 5. Marco, Rome Cavalieri Commission: 3
Chair: Mr. Enrico Rispoli, Italy
Rapporteur: Ms. Anna Shnайдман, Israel
Gabriele Garnero and Danilo Godone (Italy): Generalized Maps Production: The Italian Case (5955)
Ngoc Quy Bui (Viet Nam): Model Development for Web – Atlas System Applying in Administration Management (5500)
Dias Rui and Teodoror Rui (Portugal): 3D Positional Quality Control in the 1:25000 Cartography in the Oporto Region, Portugal (5769)
Bashkim Idrizi (Macedonia, FY-ROM), Murat Meha, Fisnik Ismaili (Kosovo) and Pal Nikolli (Albania): Calculation of the National Area of the Republic of Kosovo (6050)

FIG Working Week 2012 / Rome, Italy 6–10 May 2012
FAO/FIG Forum – Academic Institutions and Opportunities to Implement the FAO Voluntary Guidelines
Monday, 7 May 2012 16:00–17:30
Venue: Caravaggio, Rome Cavalieri
Chair: Prof. Steven Frank, Chair, FIG Commission 2, USA
Opening and keynote
John Tracey-White and James Kavanagh, RICS (United Kingdom):
Reflections on the Draft Strategy and Sharing Innovative Approaches
Invited panelists:
– Charisse Griffith-Charles, Trinidad
– Cesar Luna, Philippines
– Jasper Ntwiga Mwenda, Kenya
Open discussion: reflections and ideas from the audience and wrap up
Young Surveyors Network Meeting
Monday, 7 May 2012 16:00–17:30
Venue: S. Marco, Rome
Chair: Mr. Bengt Kjelsson, Sweden
Rapporteur: Mr. Keith Hofgartner, United Kingdom
Stig Enemark (Denmark): Sustainable Land Governance: Three Key Demands (5998)
Rohan Bennett (Netherlands), Nilofer Tambauala, Abbas Rajabifard, Ian Williamson and Jude Wallace (Australia):
Contemporary Land Administration: The Importance of Being Infrastructure (5477)
This paper has been presented in one presentation together with paper no. 5475.
This is a peer reviewed paper.
Rohan Bennett (Netherlands), Abbas Rajabifard, Ian Williamson and Jude Wallace (Australia):
Nations Need National Land Administration Infrastructures (5475)
This paper has been presented in one presentation together with paper no. 5477.
This is a peer reviewed paper.
Gianni Guerrieri (Italy):
Valuations and Real Estate Database of the Italian Land Agency (6250)
Nilofer Tambauala, Abbas Rajabifard (Australia), Rohan Bennett (Netherlands), Jude Wallace and Ian Williamson (Australia):
Authoritative Land Information and Australian Property Markets (5542)
This is a peer reviewed paper.
Rudolf Kuntzel and Jürg Kaufmann (Switzerland):
The Swiss Approach of Integrated Land Administration and Land Management (5999)
Marcel Grigore and Ionut Savoiu (Romania):
Romanian Cadaster and Land Registration System – Developing a Secure Land Rights System for Romania (6066)
Flavio Marginari and Walter Iseppi (Italy):
The Land Register System and the Process of Cartographical Numerical Cadastral Formation in the Province of Trento, Italy (6147)
TS03A – Land Governance
Monday, 7 May 16:00–17:30
Venue: Cavalieri 4, Rome Cavalieri
Chair: Mr. Bengt Kjelsson, Sweden
Rapporteur: Mr. Keith Hofgartner, United Kingdom
TS03B – Volunteered Geographic Information
Monday, 7 May 16:00–17:30
Venue: Cavalieri 3, Rome Cavalieri
Chair: Ms. Gerda Schennach, Austria
Rapporteur: Mr. Gabriel Arancibia, Canada
Daniel Steudler (Switzerland):
Spatially Enabled Societies – Issues and Key Elements (5968)
Robin McLaren (United Kingdom):
Crowdsourcing Support of Land Administration (5482)
Elisia Keenja (Tanzania), Walter De Vries, Rohan Bennett and Peter Laarakker (Netherlands):
Crowd Sourcing for Land Administration: Perceptions within Netherlands Kadaster (5611)
Sofia Basiouka and Chrysyy Potsiou (Greece):
The Voluntary Contribution of Citizens in Cadastre – Crowdsourcing in Cadastre (6121)
TS03C – Construction Economics and Management III
Monday, 7 May 16:00–17:30
Venue: Caravaggio, Rome Cavalieri
Chair: Mr. Andrea Massaro, Italy
Rapporteur: Ms. Tzena Y. C. Wong, Hong Kong SAR, China
Robert Sinker (Czech Republic):
Cooperation Between Public and Private Sector – Project of Digitalization of the Cadastral Maps in the Czech Republic (6136)
Ladi Kevin and Ruya Fadason (Nigeria):
Assessing Client Value System on End-Users Satisfaction in Housing Delivery in Nigeria (5600)
Daniele Brancato (Italy):
Restructuring the Former Rural Building (6009)
Ezio Piantedosi (Italy):
Determining Energy Requirements (6106)
Anna Machaira, Tassos Labropoulos and Panagiotis Zentelis (Greece):
Green Hotelling: A Feasibility Study in the Hellenic Island of Skiros (6056)
TS03D – Multi-Sensor Systems
Monday, 7 May 16:00–17:30
Venue: S. Giovanni, Rome Cavalieri
Chair: Dr. Allison Kealy, Australia
Rapporteur: Mr. Nic Donnelly, New Zealand
Volker Schwieger (Germany):
Challenges of Kinematic Measurements (5753)
Reiner Jäger, Julia Diekert, Andreas Hosaclawski and Jan Zwienen (Germany):
Winnie Shiu and Kam-biu Tang (Hong Kong SAR, China):
Evaluation of Mobile Mapping System Survey for Public Housing Estates in Hong Kong (6094)
Gintcho Kostov (Bulgaria):
Study on the Overall Quality of the Planned fast Static GNSS Measurements, if certain Values of the Parameters are Applied in the System, Using Fuzzy Logic (5678)
This is a flash presentation.
TS03E – Planning Policies and Procedures II
Monday, 7 May 16:00–17:30
Venue: Rodi, Rome Cavalieri
Chair: Ms. Mara Morbin, Italy
Rapporteur: Ms. Yvonne Sowah, Ghana
Andrew Hunter, Stefan Steiniger and Coral Bliss Taylor (Canada):
PlanYourPlace: Merging Social Networks and Participatory GIS for Participatory Planning (5850)
Miyiwa Agunbiade, Abbas Rajabifard (Australia) and Rohan Bennett (Netherlands):
Inter-agency Collaboration for Housing Production in Federated Countries: Developing Land Administration Integration Assessment Framework (5540)
Ganesh Prasad Bhatta and Babu Ram Acharya (Nepal):
Need of Empowering Civil Society and Local Institutions for Sustainable Land Use: A Case of Nepal (5891)
This paper has been presented by Babu Ram Acharya
Sisay Tekle (Ethiopia):
Sahabattin Akkus, Tayfun Cay and Fazil Nacer (Turkey):
The Effects of Drawing Distance Applications Stated in Development Plans on Environment (5732)
This is a flash presentation.
TS03F – Deformation Monitoring I
Monday, 7 May 16:00–17:30
Venue: Malta, Rome Cavalieri
Chair: Prof. Gethin Wyn Roberts, Chair, FIG Commission 6, China PR
Rapporteur: Dr. Craig Hancock, United Kingdom
attaoua Belhaj, Boualem Ghezali and Salem Kahlouche (Algeria):
Triangulation of Delaunay: Application to the Deformation Monitoring of Geodetic Network by Use of Strain Tensors (5628)
Adrian T.G. Radulescu, Gheorghe M.T. Radulescu (Romania) and Giakas Vasilis (Greece):
Structural Monitoring Handbook – Stating the Defining Direction (5792)
Benedetto Villa, Gino Darandieli and Pietro Orlando (Italy):
Comparison between Topographic and Photogrammetric Techniques for Deformation Monitoring of the Dome of the Massimo Theatre in Palermo (5800)
Li Zhang, Mathias Stange and Volker Schwieger (Germany):
Automatic Low-cost GPS Monitoring System Using WLAN Communication (5801)

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Monday, 7 May 2012 16:00–17:30 (continued)

TS03G – Compulsory Purchase and Compensation
Monday, 7 May 16:00–17:30
Venue: Pisa, Rome Cavaleri Commission: FIG and FGF
Chair: Mr. François Mazuyer, France
Rapporteur: Mr. Marc Vanderschueren, Belgium
Marc Vanderschueren (Belgium): The Land Management Workshops and the Belgian Cadastre – Lex Ateliers du Territoire et le Cadastre Belgique (5918)
Milan Kocab (Czech Republic): Data Protection Environment and the Cadastre – Données de Protection d’Environnement et le Cadastre (6081)
Jean-Yves Bourguignon (France): Impact of Risks and of the Regulation on the Monetary Value of Goods (5703)
Ahmed Chiki and Neila Chiki (Algeria): Place Names in Algeria – La toponymie en Algérie (6123)

TS03H – Francophone Session II
Monday, 7 May 16:00–17:30
Venue: Pisa, Rome Cavaleri Commission: FIG and FGF
Chair: Mr. François Mazuyer, France
Rapporteur: Mr. Marc Vanderschueren, Belgium
Marc Vanderschueren (Belgium): The Land Management Workshops and the Belgian Cadastre – Les Ateliers du Territoire et le Cadastre Belge (5918)
Morten Hartvigsen (Denmark): Experiences with Land Consolidation in Moldova (6145)
Bambang-Edhi Leksmono, Andri Hernandi, Jamil Ansari, Yuliana Susilowati and Agus Mindarto (Indonesia): The Development of Land Consolidated Integration in the Land Acquisition of Road Network at Kebumen District, Indonesia (6192)
Anita Kwartnik-Pruc and Anna Trembecka (Poland): Analysis of Simplified Mode of Property Acquisition for the Purpose of Road Construction in Poland (5698)
Turgut Ayten and Tayfun Cay (Turkey): Problems Occurred from Nationalization of Long-distance Line Projects (5743)

TS03I – Cadastre and Land Management – Case Studies I
Monday, 7 May 16:00–17:30
Venue: S. Giorgio, Rome Cavaleri Commission: TFG Property
Chair: Dr. Chryssy Potsiou, Chair, Task Force on Property and Housing, Greece
Rapporteur: Prof. Winrich Voss, Germany
Raymond Chan (Hong Kong SAR, China): Making Land for Development – Lessons Learnt (6157)
Winrich Voss (Germany): Promoting Affordable Housing within Market Economy (6165)
Collins Kowuor (Kenya): Controlled Tenancy: A Curse or Blessing to Property Investment in Kenya (6193)
Junping (Patrick) Liao (China, PR): Housing in China (6232)
Bruno Razza (Italy): The Policy and Management of Residential Buildings, between the Economic Crisis – People’s Expectations and the Social Need for Legal Certainty in the Inventory and Taxation (6237)

TS03J – Task Force on Property and Housing I
Monday, 7 May 16:00–17:30
Venue: S. Giorgio, Rome Cavaleri Commission: TFG Property
Chair: Dr. Chryssy Potsiou, Chair, Task Force on Property and Housing, Greece
Rapporteur: Prof. Winrich Voss, Germany

TS03K – Special Session on Catastrophic Disaster of East Japan Earthquake and Tsunami
Monday, 7 May 16:00–17:30
Venue: Pisa, Rome Cavaleri Commission: FIG and FGF
Chair: Mr. Koichi Hirata, Japan
Rapporteur: Mr. Koichi Hirata, Japan
Shunji Murai (Japan): Lessons from East Japan Earthquake and Tsunami (5720)
Toru Nagayama, Kazuo Inaba, Tamotsu Hayashi and Hiroyuki Nakai (Japan): How the National Mapping Organization of Japan Responded to the Great East Japan Earthquake? (5791)
Yoshikawa Kazuo, Okajima Yuuki and Takagishi Susumu (Japan): Disaster Monitoring Using Remote Sensing for the Great East Japan Earthquake (5716)
Atsushi Yamagiwa, Yohei Hiyama, Toshihiro Yahagi, Hiroshi Yara and Tetsuro Imakire and Yuki Kuroishi (Japan): Revision of the Results of Control Points After the 2011 off the Pacific Coast of Tohoku Earthquake (5910)
Koichi Hirata (Japan): Activity of the GIS Volunteer in the East Japan Great Earthquake Disaster (5744)
Ichizo Sekine and Masatake Nanjo (Japan): Readjustment of the Cadastral Map in the East Japan Earthquake Disaster Area (5888)

Opening Ceremony
Monday, 7 May 19:30–22:30
Venue: Giuseppe Sinopoli Hall, Parco della Musica
Chair: Geom. Enrico Rispollì, Congress Director, FIG 2012
The Opening ceremony will be held in Giuseppe Sinopoli Hall at the Auditorium Parco della Musica (http://www.auditorium.com, address: Viale Pietro de Coubertin). The program will consist of welcome ceremony with speeches, a concert and a welcome reception with buffet dinner. The Opening ceremony is free for all registered participants.

Corrado Clini (Italy): Opening Address (6238) Minister for Environment and Protection of Land and Sea
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Tuesday, 8 May 2012 09:00–10:30

**TS04A – Innovative Cadastre and Land Rights Management**
Tuesday, 8 May 09:00–10:30
Venue: Cavalieri 4, Rome
Chair: Mr. Peter Laarakker, Netherlands
Rapporteur: Dr. Rohan Bennett, Netherlands

**TS04B – Heights, Geoid and Gravity**
Tuesday, 8 May 09:00–10:30
Venue: Cavalieri 3, Rome
Chair: Mr. Graeme Blick, New Zealand
Rapporteur: Dr. Anders Alfredsson, Sweden

**TS04C – Cadastre and Spatial Information**
Tuesday, 8 May 09:00–10:30
Venue: Caravaggio, Rome
Chair: Mr. Daniel Steudler, Switzerland
Rapporteur: Mr. Robin McLaren, Scotland UK

**TS04D – Hydrographic Technologies**
Tuesday, 8 May 09:00–10:30
Venue: S. Giovanni, Rome
Chair: Dr. Volker Böder, Germany
Rapporteur: Mr. Gordon Johnston, United Kingdom

**TS04E – Urban Rural Interrelationships**
Tuesday, 8 May 09:00–10:30
Venue: Rodi, Rome
Chair: Prof. Theo Koetter, Germany
Rapporteur: Mr. Winston Ayeni, Nigeria

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**FIG/GLTN – Role of Grassroots Organizations in Addressing Land Administration Challenges**
Tuesday, 8 May 09:00–10:30
Venue: Ellisse, Rome
Commission: GLTN and FIG
Chair: Dr. Diane Dumashie, Chair, FIG Africa Task Force, United Kingdom
Rapporteur: Mr. Danilo Antonio, GLTN Secretariat

**Keya Kunte SPARC, Slum Dwellers International (India): Participatory Mapping for Citywide Slum Up-grading in India**

**Michael Taylor, International Land Coalition (Italy): Alternative to Land Titling: Indigenous Peoples’ Experience from the Philippines**

**Martha Mereso Sengeruan, MWEDO, Huairou Commission (Tanzania): Making the Village Land Act Work for Maasai Women in Tanzania**

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**Jens Riecken and Markus Seifert (Germany): Challenges for the Multi Purpose Cadastre**

**Flavio Ferrante (Italy): Evolution of the Cadastre Cartographical System for Land Govt. (6251)**


**Ivana Stanković, Stojanka Branković and Nenad Tesla (Serbia): Development of e-Processes Concept in the Real Estate Cadastre within the Quality Improvement Project (5872)**

**Brian Marwick, Abbas Rajabifard, Ian Williamson and Mohsen Kalantari (Australia): National Land Information Infrastructure through a Collaborative Framework (5896)**

**Adriano Angelini and Ciro Sugameli (Italy): The Land Cadastre, between Historicity and Modernity – An Operative Evaluation DEone with GNSS Techniques in the Provinces of Roma, Latina, Frosinone and Rieti, Italy (6209)**

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**Brent Jones (USA) and Nick Land (United Kingdom): Cadastre 2.0 – A Technology Vision for the Cadastre of the Future (5601)**

**Renee Shields and Christine Gallagher (USA): Height Modelization in the United States: Implementing a Vertical Datum Referenced to a Gravimetric Geoid Model (5659)**

**Daniel Roman and Neil Weston (USA): Land Administration Standardization with Focus on Evidence from the Field and Processing of Field Observations (6057)**

**Anna Shnaidman, Uri Shoshani and Yerach Doytsher (Israel): Toward Analytical Cadastre – Case Studies based on Genetic Algorithm (5853)**

**Eva-Maria Unger, Gerhard Navratil and Stefan Klotz (Austria): Model Transformation within the Context of INSPIRE (6042)**

**Efim Dimopoulou (Greece): Towards an Integrated Cadastral System Fulfilling LPIS Requirements (6034)**

**Jaroslaw Bydlosz (Poland): The Cadastre in Poland – The Current Status and Possibilities of Transformation Into 3D One (5809)**

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**Peter van Oosterom, Christiaan Lemmen and Harry Uitermark (Netherlands): The Gap – New Technologies and Airborne LiDAR Bathymetry Survey Techniques in European Environmental Monitoring Projects (5913)**

**Abdou Romano and Pierluigi Duranti (Italy): Autonomous Unmanned Surface Vessels for Hydrographical Measurement and Environmental Monitoring (6118)**

**Joanna Kuczynska and Beata Wieczorek (Poland): Usefulness of Terrestrial Laser Scanner for Determining Bank of the River (5778)**

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**Mohsen Kalantari (Australia) and Mark Sinclair (Australia) and Paul Seaton (United Arab Emirates): Closing the Gap – New Technologies and Airborne LiDAR Bathymetry Survey Techniques in European Environmental Monitoring Projects (5913)**

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**Maulid Bwabo, Wakuru Magigi (Tanzania) and Axel Drescher (Germany): Institutional Structures Conflicts, Change Dynamics and Its Impacts on Livelihood Sustainability in peri-Urban Settlements: An Analysis of Social Economic Dynamics and Land Use Change in Informal Neighborhood in Kilimanjaro-Tanzania (5589)**

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Tuesday, 8 May 2012 09:00–10:30 (continued)

**TS04F – Deformation Monitoring II**
Tuesday, 8 May 09:00–10:30
Venue: Malta, Rome Cavalieri Commission: 6
Chair: Mr. Vincent Lui, Hong Kong SAR, China
Rapporteur: Mr. Brian Coutts, New Zealand
Yassine Elhanti, Abderrahim Magri, Tayeb Tchalilait and Mohamed Baaya (Morocco): Contribution of the Surveying Operations in the Executing of the Bridges: A Case Study Bridge Hassan II between Rabat and Sale (6124)

**TS04G – Valuation – Mass Appraisal Techniques**
Tuesday, 8 May 09:00–10:30
Venue: Bernini, Rome Cavalieri Commission: 9
Chair: Mr. Vince Mangioni, Australia
Rapporteur: Dr. Frances Plimmer, Chair, FIG Commission 9, United Kingdom
Sebastian Zaddach and Hamza Alkhathib (Germany): Use of Collocation Method as an Improved Sales Comparison Approach (5826)

**TS04H – Measurement Applications of Unmanned Vehicles**
Tuesday, 8 May 09:00–10:30
Venue: Pisa, Rome Cavalieri Commission: 5
Chair: Prof. Volker Schwieger, Germany
Rapporteur: Ms. Paola Ronzino, Italy
Gabriel Muruariu, Mirela Praisler, Florin Mingireanu and Ionut Mocanu (Romania): Location and Delimitation of the Climatic Changing Areas: the Potential of a UAVs Based Validation (5587)

**TS04I – Curriculum and the Survey Body of Knowledge**
Tuesday, 8 May 09:00–10:30
Venue: S. Giorgio, Rome Cavalieri Commission: 4
Chair: Prof. Tim Goodhead, United Kingdom
Rapporteur: Ms. Irina Fartukova, Russian Federation
Liza Groenendijk, Rohan Bennett, Paul van der Molen and Jaap Zevenbergen (Netherlands): Land Administration An Academic Discipline: To Be or Not to Be (5559)
This is a peer reviewed paper.

**TS04J – Land Policy and Reform I**
Tuesday, 8 May 09:00–10:30
Venue: Raphaello, Rome Cavalieri Commission: T
Chair: Prof. Michael Barry, Canada
Rapporteur: Mr. Fabien Omboudou Njina, Cameroun
Sonja Dimova (Macedonia, FYROM): Impact of the Law on Real Estate Cadastre on Improvement of Land Governance (5483)
Armands Auzins and Edvins Kapostins (Latvia): New Land Management Law for Providing a Sustainable Land Management in the Republic of Latvia (5492)
This is a peer reviewed paper.

**TS04K – Task Force on Surveyors and the Climate Change I**
Tuesday, 8 May 09:00–10:30
Venue: Leonardo, Rome Cavalieri Commission: TF Surveyors & Climate Change
Chair: Prof. John Hannah, Chair, Task Force on Surveyors and the Climate Change, New Zealand
Rapporteur: Dr. Michael Sutherland, Chair, FIG Commission 4, Canada
John Hannah (New Zealand): A New Approach to Determining the Long-Term Trend in Relative Sea Levels (5635)

**Charles Nettleman, III (USA): Policy Options to Mitigate Coastal Climate Change (5466)**

Amaneh Jadi Mokakh, Mir Abolfazl Mostafavi, Yvan Bédard and Bernard Long (Canada): Toward a Spatial Decision Support System to Improve Coastal Erosion Risk Assessment: Modeling and Representation of Risk Zones (5958)

**Martinus Vranken and Sanne Broekhof (Netherlands): Contribution of Cadastral Information to Climate Change Policy in the Netherlands (5726)**

Mary Ajayi, Oywwole Bello and Ademola Akinbobola (Nigeria): Urbanisation and Climate Change: The Need for Sustainable Housing Development in Southwestern Nigeria (5787)

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This is a flash presentation.
**FIG/GLTN Forum – Achieving the GLTN Agenda and the Role of Land Professionals**

*TS05A – 3D and 4D Cadastre I*

Tuesday, 8 May 14:00–15:30
Venue: Cavalieri 4, Rome Cadastre Commission: 7 Chair: Dr. Markus Seifert, Germany Rapporteur: Mr. Vincent Thomas, Canada

**Arvo Vitikainen and Juhana Hiironen** (Finland): Development Scenarios of the 3D Cadastral System in Finland (5554)

**Tan Liat Choon and Khadijah Hussin** (Malaysia): Establishing 3D Property Rights in Malaysia (5599) This is a peer reviewed paper.

**Pieluigi Viola** (Italy): From the Old Map to the Digitalized Cartography – the Italian Experience (6256)

**Maurizio Foderà** (Italy): The Subsoil Cadastre of Mazara del Vallo (6187)

**FIG/GLTN Forum – Achieving the GLTN Agenda and the Role of Land Professionals**

*TS05B – GNSS CORS Infrastructure and Applications I*

Tuesday, 8 May 14:00–15:30
Venue: Cavalieri 3, Rome Cadastre Commission: 5 Chair: Dr. Neil Weston, USA Rapporteur: Dr. Allison Kealy, Australia

**Audrey Martin and Eugene McGovern** (Ireland): An Evaluation of the Performance of Network RTK GNSS Services in Ireland (5582) This is a peer reviewed paper.

**Clarissa Augustinus**, UN-Habitat: Challenges in the Land Sector: GLTN’s Response and Strategies

**Stig Enemark**, FIG Honorary President (Denmark): Role of Land Professionals in Advancing GLTN Agenda

**Panel Discussion**

**FIG/GLTN Forum – Achieving the GLTN Agenda and the Role of Land Professionals**

*TS05C – Finance and Investment*

Tuesday, 8 May 14:00–15:30
Venue: Caravaggio, Rome Cadastre Commission: 9 Chair: Mr. Antonio Cabras, Italy Rapporteur: Mr. Mauro Catanoso, Italy

**Manohar Velpuri** (Singapore) and Fabio Pinna (Italy): Real Estate Indices as a Barometer of Stable Real Estate Returns and Predictor of Real Estate Risks During Real Estate Boom or Burst Cycles (5526) This is a peer reviewed paper.

**Eva Sieminska and Malgorzata Rymanzak** (Poland): Bank Risk in Real Estate Finances in Poland (5495) This is a peer reviewed paper.

**Antonio Cabras** (Italy): Evaluating Risk in Real Estate Investments in Areas of Special Value and Environmental Beauty (6111) This is a peer reviewed paper.

**Antonio Benvenuti** (Italy): The Mortgage Lending Value (6102) This is a peer reviewed paper.

**Oyewole Mustapha Bello** (Nigeria): Factors Shaping Real Estate Investment in Nigeria (5880)

**Francesco Parrinello** (Italy): The Recovery of Ancient Alicia (6188)

**TS05D – City Development and Planning**

Tuesday, 8 May 14:00–15:30
Venue: S. Giovanni, Rome Cavalieri Commission: 8 and 3 Chair: Mr. Wafala Nabutola, Chair, FIG Commission 8, Kenya Rapporteur: Mr. Cromwell Manaloto, Italy

**Vince Mangioni** (Australia), Kauko Viitanen, Heidi Falkenbach and Tuomo Sipilä (Finland): Three Dimensional Property Rights and (Stratum) Reassembly: A Critique of Two Emerging Cities (5560) This paper has been presented by Prof. Kauko Viitanen, Finland. This is a peer reviewed paper.

**Anna Wojewnik-Filipkowska** (Poland): Public Private Arrangements in City Revitalization Projects (5518) This is a peer reviewed paper.

**Pertti Tamminen** (Finland): Urban Sustainability in Vuores, a New Housing Development in Tampere (5717)

**Eunice Macharia** (Kenya): Managing Expansion of Commercial Districts for Sustainable Development (6019)

**Isaac Kazungu, Waku Kur Magigi** (Tanzania) and Axel Drescher (Germany): Agribusiness Social Enterprises for Sustaining Livelihoods in Urban Settlements in Transition: Evidence from Nursery Gardens in Rapidly Urbanizing City in Tanzania (5590)

**TS05E – Technical Aspects of Spatial Information II**

Tuesday, 8 May 14:00–15:30
Venue: Rodi, Rome Cadastre Commission: 3 Chair: Prof. Charalabois Ioannis, Greece Rapporteur: Mr. Demetris Deme-triou, Cyprus

**Alfredo Scognamiglio** (Italy): Change Detection Methods for Multitemporal Analysis of Satellite Data Aimed at Environmental Risk Monitoring (5771)

**Fazlí, Engin Tombuş, Mahmut Yüksel, Murat Şahin, Ibrahim Murat Özulu and Mustafa Çaşar** (Turkey): Assessment of Soil Erosion Based on the Method USLE: Çorum Province Example (5848)

**Chandana Dinesh Parape and Masayuki Tamura** (Japan): Mathematical Morphology Based Approach for Building Damage Estimation from VHR Airborne Imagery of Ishinomaki Area in 2011 Pacific Coast of Tohoku Earthquake and Tsunami (6093)

**Bence Toronyi** (Hungary): Spatial Data Support for Building Monitoring (6087)

**Seloua Chouaf and Youcef Smara** (Algeria): Feature Extraction Methods Based on Wavelets Transform and Orthogonal Projections Applied to Hyperpectral Images (5781) This is a flash presentation.

**Guilherme Souza and Amilton Amorim** (Brazil): LiDAR Data Integration for 3D Cadastre: Some Experiences from Brazil (6022) This is a flash presentation.
TS05F – Hydrographic Surveying
Tuesday, 8 May 14:00–15:30
Venue: Malta, Rome Cavalieri
Commission: 4
Chair: Mr. Jerry Mills, USA
Rapporteur: Dr. Michael Sutherland, Chair of Commission 4, Canada

Dany Lavrov, Gilad Even Tzur (Israel) and Jörg Reinking (Germany):
Sea Surface mapping with GPS (5714)

Cassandra Nanial, Dexter Davis (Trinidad And Tobago) and Michael Sutherland (Canada):
An Evaluation of Tides in the Caribbean (5875)

Ayhan Ceylan and Ilke Ekiçoglüz (Turkey):
A Study on the Assessment of Bathymetric Changes via GIS: Alti-Napa Dam (Konya) Example (5992)

Reuma Arav, Sagi Filin and Yoav Avni (Israel):
Monitoring of Changes along Receding Lake Environments (6047)

Shabnam Farboud (Iran):
Determination of Accurate Sea Border Lines of Countries (5855)
This is a flash presentation.

TS05G – Taxation
Tuesday, 8 May 14:00–15:30
Venue: Bernini, Rome Cavalieri
Commission: 9
Chair: Prof. Winrich Voss, Germany
Rapporteur: Dr. Frances Plimmer, Chair, FIG Commission 9, United Kingdom

Vince Mangion (Australia):
Land Value Taxation – Meeting the Principles of ‘Good Tax Design’ (5486)
This is a peer reviewed paper.

Mehmet Ertas (Turkey):
The Necessity of Real Estate Valuation for Property Taxation (5614)

Joyceyn Makena and Mwenda Makathimo (Kenya):
The Role of Fiscal Instruments in Enhancing Land Use and Management (6078)

Maximilian Karl (Germany):
The Fiscal Reform of Land Tax in Germany (5766)

Mehmet Çete (Turkey):
The Need for Re-Engineering in the Turkish Real Estate Valuation System (5912)

Martin Smodiš and Dušan Mitrović (Slovenia):
Development and Implementation of the Real Estate Mass Valuation System in Slovenia (5672)

Saviour Mantey and Naa Dedei Tagoe (Ghana):
Geo-Property Tax Information System – A Case Study of the Tarkwa Nsuaem Municipality, Ghana (5882)

TS05H – Remote Sensing I
Tuesday, 8 May 14:00–15:30
Venue: Pisa, Rome Cavalieri
Commission: 5, 6 and 3
Chair: Prof. Ralf Schrot, Germany
Rapporteur: Dr. David Martin, France

Síria Fernandes Parreira and Flavio Boscatto (Brazil):
Digital Elevation Model (DEM) Generated from the IKONOS Images Stereopair (5491)

Mariane Alves Dal Santo, Fernandes Parreira Síria, Francisco Henrique Oliveira, Pedro Henrique Machado Porath and Thales Vargas Furtado (Brazil):
The Use of GNSS Geodetic Receiver to Orthorectification of IKONOS II Satellite Images (5490)
This is a flash presentation.

Fatma Canaslan and Aydin Ustun (Turkey):
Impact of Perpendicular and Temporal Baseline Characteristics in InSAR Coherence Maps (5767)
This is a flash presentation.

Jeffrey Needham and Benjamin Dash (New Zealand):
Dynamic Deformation Monitoring of a Transmission Tower Undergoing Failure Testing by Close Range Terrestrial Photogrammetry (5867)
This is a flash presentation.

Mohamed Baadeche and Youcef Smara (Algeria):
Road Extraction Using Radar ERS SAR Images of Algiers, Algeria (5782)
This is a flash presentation.

TS05J – Mining and Underground Engineering Surveying I
Tuesday, 8 May 14:00–15:30
Venue: Raffaello, Rome Cavalieri
Commission: 2
Chair: Ms. Liza Groenendijk, Netherlands
Rapporteur: Dr. Francis Roy, Canada

Gethin Roberts (China, PR):
International University Education; The University of Nottinhgam Ningbo China (5892)

Stella Soni (Nigeria):
Life Long Learning – Educational and Training Services (5945)

Sergey Atamanov and Sergey Grigoryev (Russia):
Innovative Technologies of Automated Training of Using Technology GPS–GLONASS for Surveyors (5961)

TS05M – Cadastre and Land Management – Case Studies II
Tuesday, 8 May 14:00–15:30
Venue: S. Marco, Rome Cavalieri
Commission: 7
Chair: Mr. Andras Ossko, Hungary
Rapporteur: Dr. Sergei Shavrov, Belarus

Manuel Alcazar Molina (Spain):
Proposal Rustic Cadastral Valuation Methodology (6148)

Dek Kie Tcha (Republic of Korea):
A Study on PAl(Positional accuracy Improvement) of the Korea Cadastral Resurveying Pilot Project (5897)
This is a flash presentation.

Akin Kisa, Sinan Colak and Nurdan Şen (Turkey):
The Effects of Technological Developments to the Spatial Data Production Costs in the General Directorate of Land Registry and Cadastre (TKGM) (5793)

Raphael Ike Ndokuwu and Njike Chigbu (Nigeria):

Oluseye Thomas Dabiri (Nigeria):
The Evolutionary Trend of Cadastre Development in Delta State of Nigeria (6068)
This is a flash presentation.

Stefan Ovidiu, Gheorghe MT Radulescu and Gabriel Badescu (Romania):
The Achievement of the Mining Cadastre in Romania-Baia Mare Mining Area and Cadastre 2014 Vision (5849)
Tuesday, 8 May 2012 16:00–17:30

TS06A – Marketing and Management of Professional Survey Education
Tuesday, 8 May 16:00–17:30
Venue: Cavalieri 3, Rome Cavalieri
Commission: 3 and 7
Chair: Prof. Marco Placido, Italy
Rapporteur: Mr. Peter van Oosterom, Netherlands

TS06B – e-Governance
Tuesday, 8 May 16:00–17:30
Venue: Cavalieri 3, Rome Cavalieri
Commission: 3 and 7
Chair: Mr. Kees de Zeeuw, Netherlands
Rapporteur: Mr. Enrico Rispoli, Italy

TS06C – Implementation of Plans and Infrastructure
Tuesday, 8 May 16:00–17:30
Venue: Caravaggio, Rome Cavalieri
Commission: 8
Chair: Mr. Collins Kowuru, Kenya
Rapporteur: Mr. Cromwell Manaloto, Italy

TS06E – GNSS CORS Infrastructure and Applications II
Tuesday, 8 May 16:00–17:30
Venue: Rodi, Rome Cavalieri
Commission: 5
Chair: Dr. Neil Weston, USA
Rapporteur: Ms. Paola Ronzino, Italy


Maria Ovdi (Moldova): Establishment of MOLDPOS-a Continuously Operating Reference Stations Network for Moldova (5663)

Hasanuddin Z. Abidin, Tony S. Haroen, Imam Mudita and Farid H. Adijanto (Indonesia): Implementation of GPS CORS for Cadastral Survey and Mapping in Indonesia: Status, Constraints and Opportunities (5900)

Edward Kuruwakumire (Zimbabwe) and Nyaradzo Chaminama (Netherlands): An Analysis of Data Handling Techniques in Zimbabwe (5502)

This is a peer reviewed paper.

Joel van Cranenbroeck (Belgium) and Vincent Lui (Hong Kong SAR, China): The Reasons to Succeed and to Fail a GNSS RTK Positioning Infrastructure Project (6095)

This paper has been presented by Vincent Lui.
Tuesday, 8 May 2012 16:00–17:30 (continued)

TS06G – Engineering Surveying, Machine Control and Guidance

Tuesday, 8 May 16:00–17:30
Venue: Bernini, Rome Cavalieri
Commission: 6
Chair: Prof. Heiner Kuhlmann, Germany
Rapporteur: Mr. Alan Wright, United Kingdom
Vadim Rokhin and Gilad Even-Tzur (Israel): Attitude Determination by Means of Dual Frequencies GPS Receiver (5715)
Ahmet Sami Kılınç and Tamer Baybura (Turkey): Determination of Minimum Horizontal Curve Radius Used in the Design of Transportation Structures, Depending on the Limit Value of Comfort Criterion Lateral Jerk (5563)
Heiner Kuhlmann and Markus Wieland (Germany): Steering of a Seeding Process with a Multisensor System (5820)
Janusz Dabrowski (Poland): The Statistic methods of Surveying, Buildings (5952)
Sebastian Kropp (Germany): The Influence of Flooding on the Value of Real Estate (5729)
Radosław Cellmer, Adam Seneta and Agnieszka Szczechanska (Poland): The Use of Linear Features as Ground Control Information for the Orientation of Historical Aerial Photos (6032)
This is a flash presentation.
Andræa De Seixas, José Roberto De Seixas and José Jorge De Seixas (Brazil): Verification and Control of Vertical Bench Mark Applied for Settling Measurements of Large Structure Buildings (5952)
This is a flash presentation.

TS06H – Valuation – Environmental Factors

Tuesday, 8 May 16:00–17:30
Venue: Pisa, Rome Cavalieri
Commission: 9
Chair: Mr. Michael Yovino-Young, USA
Rapporteur: Dr. Frances Plimmer, Chair, FIG Commission 9, United Kingdom
Sarah McCarry and Jake Crothers (New Zealand): Valuation Challenges Arising from New Zealand Earthquakes (6053)
G. Michael Yovino-Young (USA): Valuation of Preservation and Conservation Easements (6171)
Bayram Uzun and Nilda Celik (Turkey): Deprive of the Property and Just Satisfaction in the Context of the Protection of the Cultural Heritage (5606)
This is a flash presentation.

This is a flash presentation.

TS06I – Remote Sensing II

Tuesday, 8 May 16:00–17:30
Venue: S. Giorgio, Rome Cavalieri
Commission: 5, 6 and 3
Chair: Mr. Jacky Chow, Canada
Rapporteur: Mr. Rob Sarib, Australia
Chris Papakosta, Charalabos Ioannis and Dimitra Vassiliaki (Greece): The Use of Linear Features as Ground Control Information for the Orientation of Historical Aerial Photos (6032)
This is a flash presentation.

Chair: mr.
Chair: mr.
Chair, FIG Commission 9, United Kingdom
Venue: Bernini, Rome Cavalieri
Tuesday, 8 May 16:00–17:30
Machine Control and Guidance
TS06G – Engineering Surveying, Machine Control and Guidance
Tuesday, 8 May 16:00–17:30
Venue: Bernini, Rome Cavalieri
Commission: 6
Chair: Prof. Heiner Kuhlmann, Germany
Rapporteur: Mr. Alan Wright, United Kingdom
Vadim Rokhin and Gilad Even-Tzur (Israel): Attitude Determination by Means of Dual Frequencies GPS Receiver (5715)
Ahmet Sami Kılınç and Tamer Baybura (Turkey): Determination of Minimum Horizontal Curve Radius Used in the Design of Transportation Structures, Depending on the Limit Value of Comfort Criterion Lateral Jerk (5563)
Heiner Kuhlmann and Markus Wieland (Germany): Steering of a Seeding Process with a Multisensor System (5820)
Janusz Dabrowski (Poland): The Statistic methods of Surveying, Buildings (5952)
Sebastian Kropp (Germany): The Influence of Flooding on the Value of Real Estate (5729)
Radosław Cellmer, Adam Seneta and Agnieszka Szczechanska (Poland): The Use of Linear Features as Ground Control Information for the Orientation of Historical Aerial Photos (6032)
This is a flash presentation.
Andræa De Seixas, José Roberto De Seixas and José Jorge De Seixas (Brazil): Verification and Control of Vertical Bench Mark Applied for Settling Measurements of Large Structure Buildings (5952)
This is a flash presentation.

TS06J – Hydrography Development

Tuesday, 8 May 16:00–17:30
Venue: Raphaello, Rome Cavalieri
Commission: 4
Chair: Ms. Angela Etonovbe, Nigeria
Rapporteur: Prof. Jonathan Li, Canada
Alain De Wulf, Denis Constales, Cornelis Stal and Timothy Nuttens (Belgium): Accuracy Aspects of Processing and Filtering of Multibeam Data: Grid Modeling versus TIN Based Modeling (5963)
Benedicta Amarachi Ugwulebo (Nigeria): Hydrographic as a Tool to Improve Job Opportunities for Young Professionals in the Society, Nigeria (5881)
Lars Schiller, Volker Böder and Hans Werner Schenke (Germany): The Position of Hydrography in a System of Sciences – A Comprehensive Definition and Systematic Subdivision of the Discipline (5858)

Tuesday 17:30–18:30

Director General Forum – Reception

Tuesday, 8 May 17:30–18:30
Venue: Terrazza degli Aranci
– For participants of the Director General Forum and Presidents of member associations.
– By invitation only.
Wednesday 09:00–10:30

**General Assembly of the Union of Mediterranean Surveyors, UMG**
Wednesday, 9 May 09:00–10:30
Venue: Caravaggio, Rome
Chair: Prof. Rudolf Staiger, FIG
Vice President, Germany
Rapporateur: Prof. Volker Schieweger, Germany
Commission: UMG

**FIG/GLTN – Contributing to GLTN Agenda – A Dialogue between Land Professional Cluster and GLTN**
Wednesday, 9 May 09:00–10:30
Venue: Leonardo, Rome
Chair: Mr. CheeHai Teo, FIG
President, Malaysia
Commission: GLTN and FIG
Venue: Caravaggio, Rome

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### Presentations:

- **International Union of Notaries (tbc)**
- **Alternative Land Recordation Approaches**
- **Swedesurvey: Tommy Österberg**, Lantmäteriet (Sweden): Cost and Financing of Land Administration
- **Royal Institution of Chartered Surveyors – RICS: Muhammad Szwazuri**, Deputy Principal, Mombasa Polytechnic University College (Kenya): Valuation Methodology of Unregistered Properties
- **Statkart, Norway: Mr. Helge Onsrud**, Statkart (Norway): Norwegian Project on a New Cadastre System for Armenia based on SOA and OSS and Cadastre Authorities in Cape Verde
- **OGS, France:** French Contribution

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### Open Discussion

**TS07A – Laser Scanners I**
Wednesday, 9 May 09:00–10:30
Venue: Caravaggio 4, Rome
Chair: Prof. Rudolf Staiger, FIG
Commission: 6 and 5
Rapporateurs: Mr. Jürg Kaufmann, Switzerland

- **Reha Metin Alkan** (Turkey): Analysis of the Accuracy of Terrestrial Laser Scanning Measurements (6097)
- **Branko Kordic, Bosko Pribivcic and Almin Dop** (Croatia): Application of Terrestrial Laser Scanning in the Preservation of Fortified Caves (5967)
- **Khaled El Nabbout** (Germany): 3D Laser Scan Applications in Cultural Heritage Conservation (6231)
- **Eleonora Bertacchini, Alessandro Capra, Cristina Castagnetti and Riccardo Rivola** (Italy): Investigating an Active Rockslide by Long-range Laser Scanner: Alignment Strategy and Displacements Identification (6040)
- **Massimo Secchia** and **Federico Uccelli** (Italy): Laser Scanner and GPS – Stop & Go (6152)
- **Imane Sebari and Mohamed Moutaouakkil** (Morocco): Investigating the Potential of Terrestrial Laser Scanner for Volume Calculation (5970)
- **Corinna Harmening, Jens-André Paffenholz and Hamza Alkhathib** (Germany): Analysis of High Resolution 3D Trajectories for Geo-referencing Purposes (6003)

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**TS07B – Cadastral and Land Administration Perspectives**
Wednesday, 9 May 09:00–10:30
Venue: Caravaggio 3, Rome
Chair: Mr. Daniel Roberge, FIG
Commission: 7 and 3
Rapporateurs: Mr. Ulrike Klein, Germany

- **Paul van der Molen** (Netherlands): After 10 Years of Criticism: What Is Left from the Ideas of De Soto? (5503)
- **Gerda Schennach** (Austria): Land Management in a Cadastre 2.0 Surrounding (5658)
- **C.J. (Kees) de Zeeuw** (Netherlands): Land Administration for People, Profit and Planet (5802)
- **Anders Åberg** (Sweden): Registration and Management of Common Facilities (5680)
- **Don Grant** (New Zealand): A Sustainable Cadastre for New Zealand (5936)
- **Ake Uthas and Lynne Nyongesa** (Kenya): National Land Information Management System in Kenya (6218)

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**TS07D – GIS Applications**
Wednesday, 9 May 09:00–10:30
Venue: Rodi, Rome
Chair: Prof. Angel Yanakiev, Bulgaria
Rapporateurs: Dr. Ulrike Klein, Germany

- **Adel AlDoukhi** (Kuwait), Mohamed Ait Belaid (Bahrain) and Luwa Ali (Kuwait): Beaches Management in the State of Kuwait Based on the Application of Carrying Capacity along with GIS/RS Techniques (5463)
- **Gomaa Dawod** (Egypt), Khalid Al-Ghamdi, Meraa Mirza and Ramz Elzahrany (Saudi Arabia): GIS Evaluation of Urban Growth and Flood Hazards: A Case Study of Makkah City, Saudi Arabia (5479)

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**TS07E – Setting the Boundaries for Large and Small Territories**
Wednesday, 9 May 09:00–10:30
Venue: Rodi, Rome
Chair: Mr. Domenico Romanelli, Italy

- **Haim Srebro** (Israel): International Boundary Making – Methodology and Practice (5669)
- **Anniezka Bieda, Pawel, Hanus and Piotr Parzych** (Poland): The Problems of Establishing Cadastral Boundaries in River Erosion and Accumulation Areas, According to the Polish Law (5728)
- **Gottfried Konene** (Germany): Alternatives for Economic Boundary Determination in the Establishment of a Cadastral System (5808)
- **Delphine Mareché** (Belgium): Analysis of International and National Boundary Settlement and Demarcation Issues (5931)

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**TS07F – Task Force on Surveyors and the Climate Change II**
Wednesday, 9 May 09:00–10:30
Venue: Malta, Rome
Chair: TF Surveyors & Climate Change
Rapporateurs: Mr. Manohar Velpuri, Singapore

- **Oluosla Atilola** (Nigeria): Climate Change and the Environment: Issues and Geoinformation Challenges (6098)
- **Manohar Velpuri** (India) and **Anusha Piduguri** (Singapore): Climate Change Risks and Changing Face of Real Estate (6005)
- **Mathew Warnest** (Bahrain), Didier Sagashya and Emmanuel Nkurunziza (Rwanda): Emerging in a Changing Climate – Sustainable Land Use Management in Rwanda (5991)
- **Mauro Catalano** (Italy): Sustainable Housing in the Province of Bolzano Alto Adige, Italy – Thinking in Terms of a Co2 Neutral Climate (6115)
FIG Working Week 2012 / Rome, Italy 6–10 May 2012

TS07G – Planning, Environment and Water Management

Wednesday, 9 May 2012 09:00–10:30
Venue: Bernini, Rome Cavalieri
Commission: 5
Chair: Prof. Alessandro Dalmasso, Italy
Rapporteur: Dr. Marionne Zous, China

TS07H – GNSS Measurement Devices

Wednesday, 9 May 09:00–10:30
Venue: Pisa, Rome Cavalieri
Commission: 5
Chair: Prof. Lawrence Lau, China PR.
Rapporteur: Prof. Alessandro Dalmasso, Italy

Ulla Kallo. Hannu Koivula, Sonja Nyberg, Paavo Rouhaiva and Veikko Saarinen (Finland), Zane Cirile, Didzis Dobelis and Vladimir Golumba (Latvia): GNSS Antenna Offset Field Test in Metšahovi (5580)
This is a peer reviewed paper.

Elhassen Smaili, Khalid Ezzoubaiah and Hamid Mouatassim (Morocco): Testing the Performances of Dual Frequency GPS Real Time in the Operations of Implanting and Survey (5718)
This is a flash presentation.

Wolfgang Schauer, Philippe Zeimet and Heiner Kuhnim (Germany): Application of Sub-mm GPS and Terrestrial Measurements for the Precise Measurement of an EDM Calibration Baseline (5817)
This is a flash presentation.

Valerio Baiocchi, Grazia Pietrangionto, Martina Mormile and Maria Vittoria Milone (Italy): Innovative Methodology for GNSS Data Preprocessing (6035)
This is a flash presentation.

Ismail Sanigolu and Mustafa Zeybek (Turkey): Investigation on GPS Heighting Accuracy with Use of Tropospheric Models in Commercial GPS Software for Different Heights (5689)
This paper has been presented by Mr. Mustafa Zeybek

Lesia Boico and Gilad Even-Tzur (Israel): Applying Meteorological Data in GPS Measurements (5723)
This is a flash presentation.

Gary Zhang (Canada): A Principle for Determining the Optimum Surveying Accuracy (5473)
This is a flash presentation.

Jingui Zou, Yong Li, Jian Chen and Jianqi Kui (China, PR): The Implementation of Data Collection and Decoding Based on GNSS Antenna Array Receiver (6215)
This is a flash presentation.

TS07I – Accreditation and Quality Assurance

Wednesday, 9 May 09:00–10:30
Venue: S. Giorgio, Rome Cavalieri
Commission: 7
Chair: Dr. Gary Jeffers, USA
Rapporteur: Prof. Steven Frank, Chair, FIG Commission 2, USA

Francois Mazuyer and Rafic Khouri (France): Study Frame for Sub Saharan Surveying Studies (5656)

Tim Goodhead (United Kingdom): Quality Assurance Systems – The Difficulties in Providing a Global Unified System for Surveyors (5825)

Vladimir Golubev and Irina Fartukova (Russia): National Peculiarities of Education of Master’s Program “Cadastre and Land Management” in Russia (5942)

Federica Capriolo (Italy): Valuation, between Culture and Profession (6114)

Mustafa Cosar, Murat Sahin, Fazli Engin Tombus and Ibrahim Murat Ozulu (Turkey): An Overview to the Map Cadastral Departments at Vocational Schools: Last 5 Years (5846)
This is a flash presentation.

Thanh Bui Quang, Van Tuan Tran, Anh Tuan Tran (Viet Nam) and Walter T. de Vries (Netherlands): Ex-ante Evaluation of Aligning Education with Land Administration (Technology) in Vietnam (5814)
This is a flash presentation.

TS07J – Land Policy and Reform II

Wednesday, 9 May 09:00–10:30
Venue: Rafaelo, Rome Cavalieri
Commission: 7
Chair: Dr. Francis Roy, Canada
Rapporteur: Prof. Amanbeh Jaidi Mardikhe, Canada

Mustafa Hayri Keskoglu and Mehmet Cele (Turkey): The Pros and Cons of Building Licensed Offices of Surveying and Cadastre in Turkey (5832)

Noa Aharonov, Gershon Steinberg, Larissa Voznesensky and Gilad Even-Tzur (Israel): Accuracy Estimation of Reconstructed “Old” Cadastral Boundaries (5928)

Casty Njoroge and Mwenda Makathimo (Kenya): Examining Land Tenure Reforms in Kenya: A Case of Conversions of Freehold and Long Leases Held by Non-citizens to 99 years (5974)

Eskedar Birhan (Ethiopia): Urban Land Policy and Housing for Poor and Women in Amhara Region: The Case of Bahir Dar City (5594)

TS07L – Land Administration in Post Conflict and Post Natural Disaster Areas

Wednesday, 9 May 09:00–10:30
Venue: Ellisse, Rome Cavalieri
Commission: 7
Chair: Prof. Paul van der Molen, Netherlands
Rapporteur: Dr. Don B. Grant, New Zealand

Giocomo Di Pasquale (Italy): Administration of Lands after Earthquakes – Italian Experiences (6255)

Dimo Todorovski, Jaap Zvenenberg and Paul van der Molen (Netherlands): Can Land Administration in Post-Conflict Environment Facilitate the Post-Conflict State Building? – A Research Problem (5557)
This is a peer reviewed paper.

Anna Szafarczyk and Anita Kwatnark-Pruc (Poland): Application of Flood Marks Management System to Establish Rehabilitation Plan of Reducing Natural Disaster (5733)

Simon Ironside (New Zealand): Rebuilding Christchurch in the Wake of the 2010 & 2011 Earthquakes – A Surveyor’s Perspective (5786)

Chris Cook and Don Grant (New Zealand): Spatial Maintenance of the New Zealand Cadastre in Response to Earthquakes (5877)
This paper has been presented by Don Grant.
Wednesday 11:00–12:30

**PS3 – Plenary Session 3 – Knowledge to Evaluate**

Wednesday, 9 May 11:00–12:30
Venue: Cavalieri 4, Rome Cavour
Commission: All
Chair: Prof. Dalal S. Alnaggar, FIG Vice President, Egypt
Rapporteur: Geom. Franco Mazzoccoli, CNGeGL, Vice President, Italy

**Mario Resca**, General Manager, Development for Cultural Heritage, Ministry for Cultural Heritage (Italy): Enhancement of cultural heritage through the public awareness (6244)

**Fabio Remondino**, FBK (Italy): 3D Surveying and Modelling Technologies for the Digital Preservation of Cultural Heritage (6245)

**See Lian Ong**, RICS President, Singapore: Importance of Building Information Modeling (6246)

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**Wednesday, 9 May 2012 14:00–15:30**

**Academic Members Forum**
Wednesday, 9 May 14:00–15:30
Venue: Leonardo, Rome Cavalieri
Commission: FIG academic members.
Chair: Dr. Chryssy Potsiou, FIG Vice President
– This is a session for FIG academic members.

**Corporate Members Meeting**
Wednesday, 9 May 14:00–15:30
Venue: S. Stefano, Rome Cavalieri
Commission: FIG Corporate Members
Chair: Mr. CheeHai Teo, FIG President
– For FIG Corporate Members.
– By invitation only.

**Professional Woman – Development of Advanced Economy**
Wednesday, 9 May 14:00–15:30
Venue: Cavalieri 4, Rome Cavalieri
Commission: CNGeGL and FIG
Chair: Ms. Mariella Venditti, Journalist, RAI 3, Italy
– High profile session on gender issues organised by CNGeGL.
– Open for all interested participants.

**TS08B – The Impact of Earthquakes and Geodynamics on Geodetic Reference Frames**
Wednesday, 9 May 14:00–15:30
Venue: Cavalieri 3, Rome Cavalieri
Commission: 5 and 6
Chair: Mr. Graeme Blick, New Zealand
Rapporteur: Mr. Luca Passador, Italy

Cetin Meikik, Buulent Turgut and Haluk Ozener (Turkey): Determination of Current Velocity Field (Rate) of North Anatolian Fault in Izmirt-Sapanca Segment (5911)

Fabio Radicioni, Aurelio Stoppini, Gianfranco Fornaro, Fabio Bovenga and Davide Oscar Nitti (Italy): Long-Term GNS and SAR Data Comparison for the Deformation Monitoring of the Assisi Landslide (5914)

Paolo Farina, Giorgio Barsacchi (Italy), William H. Schulz and Jeffries A. Coe (USA): Kinematics of the Slumgullion Landslide Revealed by Ground-based InSAR Surveys (5839)

Marcin Ligas, Grzegorz Lenda and Anna Szafranszczak (Poland): Approximation Methods for an Active Landslide’s Surface Modeling (5951)

Ha Su Yoon, Yun Soo Choi and In Hun Jeong (Republic of Korea): Analysis of the Korean Peninsula Crustal Movements after the Great East Japan Earthquake (5773)

This is a flash presentation.

Wanju Bo, Guohua Yang and Fengshuang Zhang (China, PR): Crust Deformation and the Model Deduction about Generation Mechanism of Wenchuan Ms8.0 Earthquake (6216)

This is a flash presentation.

**TS08C – Laser Scanners II**
Wednesday, 9 May 14:00–15:30
Venue: Caravaggio, Rome Cavalieri
Commission: 6 and 5
Chair: Prof. Volker Schwieger, Germany
Rapporteur: Mr. Nic Donnelly, New Zealand

Cristina Castagnetti, Eleonora Bertacchini, Alessandro Capra and Marco Dubbini (Italy): Terrestrial Laser Scanning for Preserving Cultural Heritage: Analysis of Geometric Anomalies for Ancient Structures (6031)

Ivo Milev (Germany) and Vladimir Svedovich (Russia): The State-of-the-Art, Challenges and Application Potential of Terrestrial Laser Scanning Data (5806)

Craig Matthew Hancock, Gethin Wyn Roberts, Luke Bisby, Martin Cullen and James Arbuckle (United Kingdom): Detecting Fire Damaged Concrete Using Laser Scanning (6139)

Josh Quint (USA) and Dario Conforti (Italy): Trouble in Paradise: The Challenges of Mobile Lidar Surveying on a Remote Pacific Island (6004)

Jacky Chow, Derek Lichti and Willian Teskey (Canada): Accuracy Assessment of The Faro Focus3D and Leica HD56100 Panoramic Type Terrestrial Laser Scanner Through Point-based and Plane-based User Self-calibration (5865)

**TS08D – Vertical Reference Systems**
Wednesday, 9 May 14:00–15:30
Venue: S. Giovanni, Rome Cavalieri
Commission: 4 and 5
Chair: Dr. Dan Roman, USA
Rapporteur: Mr. Mikael Lilje, Sweden

David Dodd and Jerry Mills (USA): Ellipsoidally Referenced Surveys (ERS) Separation Models (5704)

This paper is presented by Jerry Mills.

Kamyar Shojaee and Nessim Khodadadi (United Arab Emirates): Annual Sea Surface Height Variations and Dynamic Topography on the Caspian Sea from Jason-1 Altimetry Data (5789)

Pavel Novak (Czech Republic): Towards Realization of a Unified World Height System (6096)

Dexter Justin Davis (Trinidad And Tobago), Michael Sutherland (Canada), Sandesh Jaggan and Demi Singh (Trinidad And Tobago): A Satellite Altimetry Based Approach to the Determining and Monitoring of Sea Level in the Caribbean (6024)

Yosef Melzer (Israel): A Simple Method to Measure Dead Sea Level (5464)

This is a flash presentation.

Elena Rokhlin and Ilida Even-Tzur (Israel): Monitoring Vertical Displacements of TGBM Using GNS Measurements and Their Contribution to the Permanent GNS Stations in Israel (5856)

This is a flash presentation.

**TS08E – Professional Work Environment – Associations, Ethics and Practice**
Wednesday, 9 May 14:00–15:30
Venue: Rodi, Rome Cavalieri
Commission: 1
Chair: Ms. Leonie Newnham, FIG Commission 1, Australia
Rapporteur: Ms. Robyn McCutcheon, Australia

Joseph Eijkeme and Chukwueze Onwuzuligbo (Nigeria): Surveying Profession and Ethical Questions (5647)

Emmanuel Tembo and Boipuso Nkware (Botswana): Sustaining the Geomatics Profession through Effective Professional Associations (5683)

Nor Ashikin Mohamed Yusof and Mohd Yunus Mohd Yusof (Malaysia): Liberalization of the Surveying Profession in Malaysia (5570)

Moha El-Ayachi, Mohamed Ettarid, Omar Sabir and Youssef IdBaha (Morocco): Toward a Professional Observing of the Surveying Profession in Morocco: A New Frame to Face New Challenges (5810)

Chukwueze Onwuzuligbo, Joseph Eijkeme and Victor Nnam (Nigeria): Surveyors’ Participation in Active Politics in Africa: Bridging the Disconnect (5625)

Winston Ayeni (Nigeria): The Surveyor General as a Programme Manager: The Nigerian Perspective (5827)

Collins Kowuor (Kenya): The Dynamics of Influencing National Policies and Legislation: The Kenyan Perspective in Land Reforms (6065)

This is a flash presentation.
Tuesday 8 May 2012 14:00–15:30

TS08F – Planning, Environment and Tourism

Wednesday, 9 May 14:00–15:30
Venue: Bernini, Rome Cavalieri
Commission: 8
Chair: Mr. Winston Ayeni, Nigeria
Rapporteur: Mr. Kwame Tenadu, Ghana

Saban Inam, Mehmet Ertas and Asli Bozdag (Turkey): The Importance of the Urban Land Policy for Sustainable Development, Problems and Solution Recommendations (5753)

Abdul-Nasser Hikmany (Tanzania): Land Planning Authorities and Sustainable Tourism in Zanzibar (5664)

Gertude Nnanjar Njar (Nigeria): Analysis of the Relationships between Tourists’ Expectation of Heritage Attributes and Satisfaction in the Cross River State Carnival (5755)


Piotr Cichocinski (Poland): How to Calculate Real Estate Accessibility (5929)

Francis HK Ng and Edward SH Au (Hong Kong SAR, China): Re-vamping Land Usage to Meet Updated Needs (5593)

Edward SH Au (Hong Kong SAR, China): Revitalization of Industrial Buildings (5597)

This is a flash presentation.

Edward SH Au (Hong Kong SAR, China): An Amalgamation of 3D Spatial Data Model for Surface and Sub-surface Spatial Objects (5889)

Natalia Vandyshcheva, Sergey Sapelnikov (Russia), Peter van Oosterom, Marian De Vries, Boudewijn Spierring, Rik Wouters, Andreas Hoogeveen (Netherlands) and Veliko Penkov (Bulgaria): The 3D Cadastre Prototype and Pilot in the Russian Federation (6037)

Andrea Lingua, Mattia De Agostino and Marco Piras (Italy): SOLDEO: A New Solution for 3D GIS Data Recording (6089)

This is a peer reviewed paper.

Martin Breunig, André Bormann, Stefan Hinz, Ernst Rank and Matthäus Schilcher (Germany): Towards 3D Geoinformatics and Computational Engineering Support for Cooperative Tracks Planning (5757)

Edward Eric Duncan andAlias Abdul Rahman (Malaysia): Towards Geo-informatics and Computational Engineering Support for Cooperative Tracks Planning (5757)

Natalia Vandyshcheva, Sergey Sapelnikov (Russia), Peter van Oosterom, Marian De Vries, Boudewijn Spierring, Rik Wouters, Andreas Hoogeveen (Netherlands) and Veliko Penkov (Bulgaria): The 3D Cadastre Prototype and Pilot in the Russian Federation (6037)

Andrea Lingua, Mattia De Agostino and Marco Piras (Italy): SOLDEO: A New Solution for 3D GIS Data Recording (6089)

This is a flash presentation.

Figure 1: Tectonic map of Nigeria showing different rock types and their distribution

Figure 2: Satellite image of the study area

Figure 3: GIS data recording (6089)

TS08G – Valuation I

Wednesday, 9 May 14:00–15:30
Venue: Bernini, Rome Cavalieri
Commission: 9
Chair: Dr. Frances Plimmer, Chair, FIG Commission 9, United Kingdom
Rapporteur: Mr. Fabio Pinna, Italy


Piotr Cichocinski (Poland): How to Calculate Real Estate Accessibility (5929)

Francis HK Ng and Edward SH Au (Hong Kong SAR, China): Re-vamping Land Usage to Meet Updated Needs (5593)

This is a flash presentation.

Edward SH Au (Hong Kong SAR, China): Revitalization of Industrial Buildings (5597)

This is a flash presentation.

Edward Eric Duncan and Alias Abdul Rahman (Malaysia): Towards Geo-informatics and Computational Engineering Support for Cooperative Tracks Planning (5757)

Natalia Vandyshcheva, Sergey Sapelnikov (Russia), Peter van Oosterom, Marian De Vries, Boudewijn Spierring, Rik Wouters, Andreas Hoogeveen (Netherlands) and Veliko Penkov (Bulgaria): The 3D Cadastre Prototype and Pilot in the Russian Federation (6037)

Andrea Lingua, Mattia De Agostino and Marco Piras (Italy): SOLDEO: A New Solution for 3D GIS Data Recording (6089)

This is a flash presentation.

Figure 1: Tectonic map of Nigeria showing different rock types and their distribution

Figure 2: Satellite image of the study area

Figure 3: GIS data recording (6089)

TS08H – 3D Principles and Technology

Wednesday, 9 May 14:00–15:30
Venue: Bernini, Rome Cavalieri
Commission: 9
Chair: Prof. Yerach Doytsher, Chair, Commission 3, Israel
Rapporteur: Ms. Mara Morbin, Italy

Oren Gal and Yerach Doytsher (Israel): Spatial 3D Analysis of Built-up Areas (5487)

This is a peer reviewed paper.

Martin Breunig, André Bormann, Stefan Hinz, Ernst Rank and Matthäus Schilcher (Germany): Towards 3D Geoinformatics and Computational Engineering Support for Cooperative Tracks Planning (5757)

Edward Eric Duncan and Alias Abdul Rahman (Malaysia): Towards Geo-informatics and Computational Engineering Support for Cooperative Tracks Planning (5757)

Natalia Vandyshcheva, Sergey Sapelnikov (Russia), Peter van Oosterom, Marian De Vries, Boudewijn Spierring, Rik Wouters, Andreas Hoogeveen (Netherlands) and Veliko Penkov (Bulgaria): The 3D Cadastre Prototype and Pilot in the Russian Federation (6037)

Andrea Lingua, Mattia De Agostino and Marco Piras (Italy): SOLDEO: A New Solution for 3D GIS Data Recording (6089)

This is a flash presentation.

Figure 1: Tectonic map of Nigeria showing different rock types and their distribution

Figure 2: Satellite image of the study area

Figure 3: GIS data recording (6089)

TS08I – Low Cost Surveying and Mapping

Wednesday, 9 May 14:00–15:30
Venue: Pisa, Rome Cavalieri
Commission: 7, 3 and 5
Chair: Mr. Larry Hotthem, USA
Rapporteur: Dr. Neil Weston, USA

Robert Antwi (Ghana), Rohan Bennett, Walter De Vries, Christiaan Lenmen and Co Meijer (Netherlands): The Requirements for Point Cadastres (5612)


This is a panel discussion open for all participants interested in the future trends in land administration. The panelists will initiate the discussion with brief statements followed by comments and discussion. Themes that will be discussed: the evolving role of land professionals, AAA vs Open/Crowdsourced Cadastre? Informal rights included, and overlapping claims, 3D and 4D in land administration.

Panelists:
– Europe: Peter Laarakker (Netherlands) and Robin McLaren (United Kingdom)
– Asia: Quang Thanh Bui (Viet Nam)
– Latin America: Diego Alfonso Erba (Argentina)
– Africa: Clarissa Augustinus (UN-Habitat)
– Young Surveyors representative: Jean-François Beaupré (Canada)

This is a flash presentation.

Figure 1: Tectonic map of Nigeria showing different rock types and their distribution

Figure 2: Satellite image of the study area

Figure 3: GIS data recording (6089)

TS08J – Building Information Modelling – BIM

Wednesday, 9 May 14:00–15:30
Venue: Raffaello, Rome Cavalieri
Commission: 10
Chair: Mr. Iain Greenway, FIg Vice President, United Kingdom
Rapporteur: Mr. Robert Sinkner, Chair, FIG Commission 10, Czech Republic

Jason Smith, President, ICES (United Kingdom): BIM from a Contractors Perspective (6248)

Ağele Alufohai, President, NIOS (Nigeria): Adoption of Building Information Modelling (BIM) and Nigeria’s Quest for Project Cost Management (6225)

Christina Alexiadi and Chryssy Potsiou (Greece): How the Integration of n-Dimensional Models (BIM) and GIS Technology May Offer the Potential to Adopt Green Building Strategies and to Achieve Low Cost Constructions (6061)

Panel discussion on BIM

Tuesday 8 May 2012 14:00–15:30

TS08L – FIG/GIM Forum on Future of Land Administration

Wednesday, 9 May 14:00–15:30
Venue: Ellisse, Rome Cavalieri
Commission: 3, 7, 8 and IIHS
Chair: Mr. John Hohol, USA
Rapporteur: Mr. Johann Martin Lun, Italy

Armağan Güleç Korumaz, O. Nuri Durlüger, Selçuk Sayın and Mustafa Korumaz (Turkey): Information and Communication Technologies in Cultural Heritage Documentation and Design Process (6207)

Francisco Henrique de Oliveira, Flavio Boscatto, Mariane Alves Dal Santo and Sonia Eliseio Rampazzo (Brazil): Visibility Spatial Analysis for Support Cultural Landscape Territorial Planning in Lages Highlands, Santa Catarina State, Brazil (5565)

This is a flash presentation.

Mustafa Korumaz and Armağan Güleç Korumaz (Turkey): The Evaluation of New Buildings behind Historic Facades in Terms of Sustainability (6253)

This is a flash presentation.

Figure 1: Tectonic map of Nigeria showing different rock types and their distribution

Figure 2: Satellite image of the study area

Figure 3: GIS data recording (6089)
Wednesday, 9 May 2012 16:00–17:30

TS09B – Precise Point Positioning
Wednesday, 9 May 16:00–17:30
Venue: Cavalieri 3, Rome Cavalieri
Commission: 5
Chair: Mr. Nic Donnelly, New Zealand
Rapporteur: Mr. Lars Engberg, Sweden

Chris Rizos, Volker Janssen, Craig Roberts and Thomas Griner (Australia):
Precise Point Positioning: Is the Era of Differential GNSS Positioning Drawing to an End? (5909)

Mohamed Elsebey and Ahmed El-Rabbanoy (Canada):
An Improved GPS-Based Precise Point Positioning Model (5569)
This is a peer reviewed paper.

Salih Alcay, Cevat Inal and Cemal Ozer Yigit (Turkey):
Contribution of GLONASS Observations on Precise Point Positioning (5617)

Cemal Ozer Yigit, Salih Alcay and Cevat Inal (Turkey):
GPS Based Ionosphere Mapping Using PPP Method (5618)

Ismail Sanlioglu and Tahsin Kara (Turkey):
Investigating Effects in GPS Time Series and Case Study on Tropospheric Effects (6080)

TS09C – Surveying and Cultural Heritage II
Wednesday, 9 May 16:00–17:30
Venue: Caravaggio, Rome Cavalieri
Commission: 6 and 5
Chair: Prof. Volker Schwieger, Germany
Rapporteur: Mr. Graeme Blick, New Zealand

Paola Ronzino (Italy):
What Future for Our Past? The Surveyor’s Task for the Preservation of Cultural Heritage (5953)

Nida Celik and Bayram Uzun (Turkey):
Cultural Heritage versus Property Rights (5868)

Ibrahim Murat Ozulu, Mustafa Suel, Fazli, Engin Tombus, Mustafa Coşar and Murat Şahin (Turkey):
The Importance of Maps at the Era of Differential gPS (5844)

Deniz Arca, Mehmet Alkan, Caglar Bayik and Dursun Zafer Seker (Turkey):
Web-Based gIS For Sfarabanbolu Historical City (6090)

TS09D – Laser Scanners III
Wednesday, 9 May 16:00–17:30
Venue: Rodi, Rome Cavalieri
Commission: 6
Chair: Prof. Ef Dimopoulou, Greece
Rapporteur: Mr. Daniele Brancato, Italy

Timothy Nuttens, Alain De Wulf, Greta Deruyter, Cornelis Stal, Hans De Backer and Ken Schotte (Belgium):
Application of Laser Scanning for Deformation Measurements: A Comparison between Different Types of Scanning Instruments (5988)

Carmen Müller, Tobias K., Kohoutek and Pascal W. Theiler (Switzerland):
Automated Site Plan Extraction from TLS Point Clouds (5655)

Hakan Karaböörd, Cihan Altuntas and Ekrem Tutat (Turkey):
Dynamic Modeling the Land Use and Land Cover in the Watershed of Arroio Grande, Rio Grande do Sul State, Brazil (5785)

Asli Dogru, Haluk Ozener, Taner Selcuk and Asli Sabuncu (Turkey):
Multidisciplinary gIS for Geoductive Research (5930)

Rongbin Wang (China, PR):
Study on Storage Structure of Digital Topographic Map Based on Version of the Concepts (6175)

Beiqi Shi, Neng Chen and Lin Shen (China, PR):
Research on Web Vector Representation of Thematic Map Using HTML (6210)
This is a flash presentation.

TS09E – GIS Algorithms
Wednesday, 9 May 16:00–17:30
Venue: Rodi, Rome Cavalieri
Commission: 8 and 3
Chair: Prof. Theo Koetter, Germany
Rapporteur: Ms. Yvonne Sowah, Ghana

Oludayo Emmanuel Abiodun and Oluwasegun Adeeoye (Nigeria):
Fire Disaster Prevention and Management Systems for Lagos Metropolis in a Geomatics Environment (5774)

Elisabetta Genovese, Valentín Przybylski and Stéphane Hallegatte (France):
Disaster Risk Management and Territorial Governance: Lessons from Xynthia Storm in France (6048)

Irwan Gumilar, Hasanuddin Zenaal Abidin, Heri Andreas, Teguh Purnama Sidiq and Mohamad Gamal (Indonesia):

Guessoum Nabil (Algeria):
Contribution of the Studies of Seismic Microzonin in the Development of Future New Cities: Case of the New City of Sidi Abdellah, Algeria (5707)
This is a flash presentation.

Francesco Bartoli (Italy):
GeoAvalanche – Spatial Data Infrastructure for Avalanche Awareness Warning (5784)
FIG Working Week 2012 / Rome, Italy 6–10 May 2012

TS09G – Valuation II

Wednesday, 9 May 16:00–17:30
Venue: Bernini, Rome Cavalieri
Commission: 7
Chair: Prof. Winrich Voss, Germany
Rapporteur: Dr. Frances Plimmer, Chair, FIG Commission 9, United Kingdom

Cromwell Manaloto (Italy): Real Estate Valuation in Insurances – Know the Hows and Whys (5944)

Simon Forbes and Tim Goodhead (United Kingdom): Investigating the Methods of Valuing Heritage Real Estate Buildings and Their 100–200 Year Life Cycle (6153)

Matteo Negri (Italy): Enhancing Real Property (6112)

Zelalem Yibrah Atsbeha (Ethiopia): Ethiopian Mortgage System and Its Impact on Credit Accessibility (5471)

This is a flash presentation.

TS09H – Innovative Technology in Land Administration

Wednesday, 9 May 16:00–17:30
Venue: Pisa, Rome Cavalieri
Commission: 7
Chair: mr. Marcel Grigore, Romania
Rapporteur: mr. Helene Mainaud Durand (Italy) and Sylvain Griffe (Switzerland)

Jongmin Lee, Byungwoon Park and Dekkie Tcha (Republic of Korea): Using Network-RTK for Cadastral Reform in Republic of Korea (5719)

Olawale Ojikutu (Nigeria), Rohan Bennett (Australia) and Liza Groenendijk (Netherlands): An Assessment of Land Acquisition in Nigeria (5548)

Antonio D’Angelis (Italy): Italian Cadaster Is Directly Updated by Surveyors (6150)

Carmela Szancer, Yaron Felus and Vera Lavan (Israel): On-line Services for Surveyors (5996)

This is a flash presentation.

TS09I – Engineering Surveying

Wednesday, 9 May 16:00–17:30
Venue: Leonardo, Rome Cavalieri
Commission: 6
Chair: Dr. Ivo Milev, Germany
Rapporteur: Mr. Raymond Chan, Hong Kong SAR, China

Sébastien Guillaume, Beat Bürki, Helene Mainaud Durand and Sylvain Griffet (Switzerland): QDaedalus: Augmentation of Total Stations by CCD Sensor for Automated Contactless High-Precision Metrology (6002)

Edi Meier, Michael Boege and Karsten Dreyer (Switzerland): Online Monitoring During Beam Assisted Girder Re-alignment at the Accelerator SLS (Swiss Light Source) (6055)

Mariusz Frukacz (Poland): The Optimum Procedures of Determining the Coefficient of Linear Thermal Expansion and Calibration of Precise Levelling Rods (5854)

Jacob Odeh Ehirorob and Osadolor Christopher Izyinyin (Nigeria): Monitoring of Gully Formation and Development for Effective Remediation and Control (5919)

Joel Van Cranendonk (Belgium), Andrey Balan (Ukraine) and Marco Di Mauro (Italy): A New Geodetic Network Design for Hydro Power Plant (5876)

Glad Even-Teur (Israel) and Joerg Reinking (Germany): Velocity Field Across the Carmel Fault Calculated by Extended Free Network Adjustment Constraints (5805)

This is a peer reviewed paper.

Richard Grover and Christine Grover (United Kingdom): Influences on the Strength of Property Rights (5583)

This is a peer reviewed paper.

Guler Yalcin (Turkey): Forest and Cadastre in Turkey and Sustainable Development (5637)

Alexander Schmidt and Murat Meha (Kosovo): Scope of Cadastre Reconstruction in the Republic of Kosovo (6006)

Marija Raskovic (Serbia): The Real Estate Administration and Market in the Republic of Serbia – Possibilities of Improvement (5780)
FIG Presidents Meeting
Thursday, 10 May 08:30–10:00
Venue: Cavalieri 2, Rome Cavalieri
Commission: Presidents of FIG members
Chair: Mr. CheeHai Teo, FIG President
- Meeting of Presidents and head of delegations of FIG member associations.
- By invitation only.

FIG General Assembly – Second Session
Thursday, 10 May 10:30–15:00
Venue: Cavalieri 3&4, Rome Cavalieri
Commission: FIG members
Chair: Mr. CheeHai Teo, FIG President
- For all FIG members.
- Open for observers.

FIG Working Week Closing Ceremony and Farewell Reception
Thursday, 10 May 15:00–16:00
Venue: Cavalieri 3&4, Rome Cavalieri
Commission: All
Chair: Mr. CheeHai Teo, FIG President
- Closing Ceremony of the Working Week will start immediately after the second General Assembly and will be followed by the Farewell Reception hosted by the Nigerian Institution of Surveyors, NIS, host of FIG Working Week 2013.
Venue Floor Plan – Rome Cavalieri

Registration, FIG and CNGeGL offices:
- Level –1

Opening Ceremony:
- Giuseppe Sinopoli Hall, Parco della Musica

FIG General Assembly & Farewell Reception & Closing Ceremony
- Cavalieri 3 & 4

Plenary Sessions
- Cavalieri 4 (Level –1)

Technical Sessions & Commission Meetings
- Cavalieri 4, Cavalieri 3, Caravaggio, S. Giovanni, Rodi, Malta, Bernini, Pisa, S. Giorgio, Raffaello, Leonardo, Ellisse, S. Marco (Level –1)

Meeting rooms:
- Commission meeting rooms: MR1 and MR2 (Level –1)
- Council meeting room: S. Stefano (Level –1)

Speakers Preparation Room:
SR (Level –1)

Conference Doctor’s Room:
DR (Level –1)

Exhibition: Level –1

FIG President: Roma (Level 0)

CNGeGL President: Tevere (Level 0)