

ISPRS SC Newsletter

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SC Newsletter (ISSN Y506-5879) is published every three months by ISPRS Student Consortium.



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Frontpage designed by Ayda Aktaş



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Would you like to join SC Newsletter team? Do you want to make a difference? Want to learn new skills?

SC Newsletter is at a stage where getting broader and better demands more people to be involved in the process of it's formation. That's why SC Newsletter team is looking for the following volunteers:

- More **people who would be willing to prepare articles** for existing or new rubrics,
- Designers of Newsletter,
- **English native speakers** for proof reading.

If you can help us with any of the above, please let us know!

info@isprs-studentconsortium.org

And also...

If you **would like to publish your research work** in the SC Newsletter send us your abstract on email written above. We will soon contact you for further information.

Dear Friends,



In the year of 1909, on the day of July 4th, a passionate scientist Professor Dolezar founded the ISPRS, the first umbrella organization within its fields. Since that day, the society enlarged its mission of scientific activities for the benefit of man and nature, adapted itself to the new scientific and technological developments and needs. In the year of 2004, the youngest part of the society, Student Consortium was established to introduce ISPRS to the new generations and integrate them to the society in the beginning of their career. SC became a focal point with several technical and social activities dedicated to youth within the last years. Since 2008 it became a global network with almost 400 members from 69 countries. This year in June, SC presented its midterm report of 2008-2012 during the ISPRS TC VI Symposium in Enschede, the Netherlands. The current progress was evaluated with outlines of future issues and perspective as well as a podium discussion of participants for a sustainable structure.

There is a lot of volunteer work and sacrifice behind SC. We produce more and more together. In the next years, SC will enlarge its structure; however it is also necessarily important to keep the quality and high numbers of activities with a dream of next generations to celebrate the next milestone of ISPRS achievements. From SC perspective with well established network there is the future imagery of ISPRS

On Behalf of Student Consortium,
Cemal Özgür KIVILCIM
ISPRS SC Chair

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Let's Come Together
to Make The World
Smaller and Smaller,
While Enlarging
and
Powering Our
Student Consortium
Network!!

JOIN US!!!

Interview

by Urša Kanjir

Prof. Dr. Emmanuel Baltsavias

It's not easy to describe life, work and all achievements of dr. Manos Baltsavias in just few sentences. If we outline a few things, we can say that he is currently a professor at the Institute of Geodesy and Remote Sensing at ETH Zurich, Switzerland, chairman of the ISPRS WG VI/5 and a grandfather. He has been actively involved, not just in ISPRS (being former second Vice President of ISPRS) for many years, but also in many other photogrammetric/remote sensing like organisations. He is an (co-)author of many publications, performs teaching, researches for shorter periods of time at different universities and has won several prestigious awards. Those who know him personally all agree that he is a remarkable person outside his unofficial part of life also.

Can you explain us what is your research field/professional work at the moment?

I have been working since 26 years at the Photogrammetry and Remote Sensing group of ETH Zurich. We are currently in an important transition phase with the retirement of Prof. Armin Gruen and the appointment of Prof. Konrad Schindler from next September. This involves quite some work, trying to build up a new growing team, improving teaching, getting funds, developing new research directions. My research interests were always in the automation of information extraction from images. I had focused mainly on geometric aspects, but I feel it's important to extend our work towards thematic aspects, which are closely linked to geometric ones.

Why did you decide for this profession in the first place (maybe you can tell us something more about your first steps)?

An interesting question. I did not decide about "my profession", I guess many other people had similar experiences. I was drifted there by life and sometimes accidental events. Actually, as a kid I was fascinated by stories and wanted to be a discoverer like Magellan and others, I loved geography, history and archaeology, and finally I landed to Photogrammetry and Remote Sensing, or better say trying to get-out useful information from images, an extremely challenging and broad topic. I do not regret it!

What would you advice to students and young professionals to be successful in their future career?

I have made many mistakes in my life and thus do not wish to give advices. Not to mention the unclear topic what "successful" means. Thus, I would never give suggestions or instructions for success. If I dare give a suggestion, I would say live in happiness with yourself and your beloved ones. If in this world, there is anything substantial beyond rates, derivatives, swaps, CDS and whatever else the financial "markets" instruct. But regarding our profession (or any other profession in general) the lines are clear: be honest, hard-working, innovative, open-minded, with knowledge and care for the persons next to you. The alternative is to become a so-called politician, work in the media, arts, sports and similar and become rich and famous.

Sorry, the success or not, lies in your hands, don't ask others for a solution.

In your opinion how important is participation of young people to international professional events like Congresses, workshops, etc? What do you think are the benefits of such activities to youth and to profession?

It is clear, young scientists are the locomotive of the scientific work within ISPRS. They develop most of the new ideas, and realize them. Unfortunately this is not properly recognized, see for example the still high registration fees, limited amount of financial support from organisers, sponsors etc. However, I think that slowly our

colleagues within ISPRS understand more and more that participation of young people in such events is very important and take support measures.

Participation is not important just for scientific reasons. Social aspects, getting to know other people, young and old, networking, learning how ISPRS functions are all additional gains for young people. I think ISPRS should take clear and permanent measures that would make easier the participation of youth in its events, taking into account also the financial aspects of this.

Regarding the fact that ISPRS is celebrating already 100th anniversary, how do you see the future of spatial information sciences (RS, photogrammetry, GIS, etc.)? What would you propose to young scientists as the most challenging fields and research problems in the profession?

This is a hard question. Spatial information sciences have undoubtedly an excellent future. Spatial and temporal geo-information will influence more and more our life down to its very details. However, if we look at the traditional education in Geomatics (coming from Surveying, Geodesy etc.) we see that many departments worldwide are closing or fused with others.



See more on next page

Often the number of students drops, while other disciplines get involved in our traditional work, and often with success.

This can be alarming, and may change soon the face of our profession. I believe we should increase a lot our PR towards the society in general, and especially the high school students, making clear what our contribution in the society is. Challenging fields and research problems exist in abundance, e.g. extracting in automated

fashion information from images, can keep us busy at least for decades. My feeling for students is that they should have very solid theoretical, especially math, foundations, but also try to find practical solutions to real problems, not just do “academic” research. Another important aspect is the combination, integration, fusion of the continuously increasing amount of data and information. Which can’t be done without the proper quality characterization and uncertainty propagation.

Seeking a new generation of geomatic engineers to meet the challenges of the future.



Ian Dowman,
Emeritus professor of Photogrammetry and Remote Sensing,
University College London
First Vice President of ISPRS

I have written already in GIS Development on my perspective on 40 years in photogrammetry, half of that active in ISPRS. I have also given an interview to GIM International and discussed the technical developments in photogrammetry and remote sensing over that period. My message in both of these articles has been that the most important challenge for the profession, and for ISPRS, is to ensure the future of the profession by training young people in the use of imagery and by educating a wide spectrum of professionals and decision makers in the importance of using geospatial data for the benefit of society at large. Orhan Altan, current President of ISPRS, was very perceptive in initiating student activities at the ISPRS Congress in Istanbul. He has been shown to be right by the speed at which the Student Consortium has become established with dynamic leaders. This augurs well for the future, but the challenges must not be underestimated. Our profession is very dependent on the global market. The production and generation of geospatial data is not universally recognized by governments and funding agencies as being a priority, so we must be creative in linking with scientists in other disciplines, and with decision makers, and by showing them how geospatial data can benefit their activities.

The shift from analogue photogrammetry to digital photogrammetry, which includes the development of satellite data, and the development of new software, has provided tools which allow the rapid exploitation of imagery for mapping and monitoring; and the internet has made imagery widely accessible. And here we can make a really important input in promoting the use of imagery and geospatial data and at the same time stress the importance of understanding the accuracy of information and the limitations on its use.

The new technology has generated exciting research topics to attract young people into the profession, but the new challenge is to make sure that the results of this research are understood and used in the wider scientific and commercial communities. The areas of computer science, medical physics and archeology have a particular interest in three dimensional data and in visualization. The use of mobile mapping systems and airborne lidar generating dense point clouds, offer a real potential for generating models which could be of very wide application. It is my experience that students from different disciplines mix more than academics at a later stage in their development, so there is a real opportunity for students to establish links with other disciplines early on and to maintain these throughout their career.

One driver of promoting the relevance of photogrammetry and remote sensing, now being embraced by governments and international agencies, is that science and technology should benefit society. This is very much promoted by the Group on Earth Observations (GEO). The United Nations Millennium Development Goals are set up as targets for governments; of particular interest to ISPRS are the goals to combat diseases and to ensure environmental sustainability. Although health may not immediately be seen as relevant to the use of geospatial data, the way in which disease spreads and the environmental factors which influence the development of disease, depend on spatial analysis and several studies on air pollution and epidemiology, for example, have demonstrated this. These applications are most relevant in developing countries and I hope that the Student Consortium will soon be able to expand its activities to Africa and Latin America, where the requirement to support education is very important.

Photogrammetry and remote sensing is at a critical stage of development. We have solved many of the problems of handling digital data, and of realizing its enormous potential; now is the time to maintain momentum by applying the data and the processing techniques to real problems and to engage with the world outside of this discipline. I look forward to seeing these challenges being met and to see a new generation of outward looking professionals emerge.

ANNOUNCEMENTS

KARL KRAUS AWARD

The ISPRS “Karl Kraus Medal” is a prize to honour the authorship of excellent textbooks in the scientific fields of Photogrammetry, Remote Sensing, and Spatial Information Sciences. The prize is dedicated to the memory of Professor Karl Kraus, a passionate teacher and author of a number of textbooks.

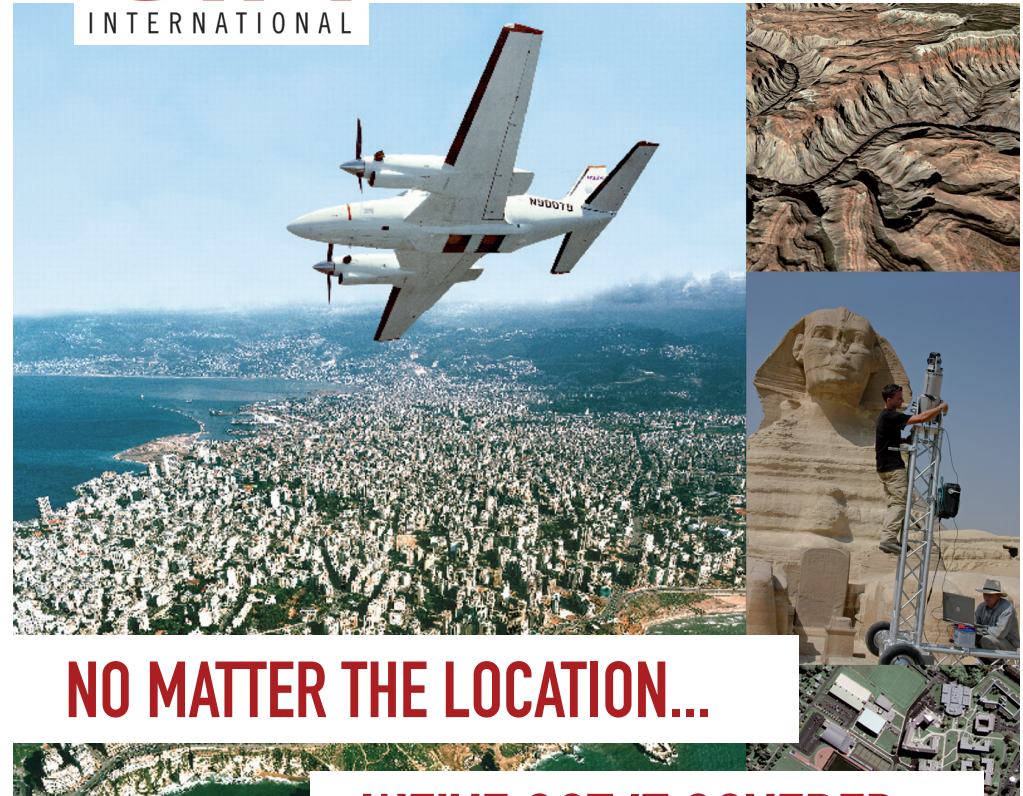
In order to present the ideas of the students for the best book, Student Consortium Chair was also appointed as one of the jury members of the jury formed of distinguished academicians. The chairman of the jury reported that “.... the 7 nominated and reviewed books- with an impressive overall volume of some 4500 pages - were all of very high quality and made the decision of the Jury no simple task.”

The winner of the award for 2010 is ‘Close Range Photogrammetry: Principles, Techniques and Applications’ by **Professor Thomas Luhmann**, (Institute of Applied Photogrammetry and Geoinformatics, University for Applied Sciences, Oldenburg, Germany), **Professor Stuart Robson**, (University College London), **Dr. Stephen Kyle**, (Consultant; Hon. Research Fellow, University College London), and **Professor Ian Harley**, (Emeritus Professor, University College London). Published by Whittles Publishing, Dunbeath, Scotland. The award will be presented at the ISPRS Centenary Celebration in Vienna on 4th July 2010. The winner of the Karl Kraus award will be presented in the centenary celebrations of ISPRS.



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GIM International, the global magazine for geomatics, focuses on reporting the latest news and communicating new developments and applications in geomatics.

ANNOUNCEMENTS

Save the Date! Great Opportunities for ISPRS Congress 2012

The XXII ISPRS Congress is going to take place between 25th August and 1st of September 2012 in the city of Melbourne, the capital of Victoria State of Australia. The preparations are well under way to make a fabulous meeting “Down Under”. The brand new eco 6-star rated Melbourne Congress Center is a perfect venue location for the ISPRS Congress with the motto of *imaging a sustainable future*. Several technical sessions oral presentations, digital poster and workshops are scheduled. The Congress will be the meeting point of the new scientific and technological developments within the last four years. Among the other activities, the Youth Forum and beyond will be organized for the next generation of the society. Student Consortium Chair Cemal Ö. Kivilcim and Melbourne Congress Director Cliff Ogleby met in Melbourne

on April 23rd of this year to evaluate the roles of Student Consortium to ensure the maximum benefits of students and young professionals to attend to the Congress. There will be several different types of supports to increase the participation of the youth to the Melbourne Congress. Ogleby addresses “Student Consortium has the full support of the Congress Director.” Save the date!

More info is available on congress website: <http://www.isprs2012-melbourne.com>



Congress Director and SC Chair after the meeting in Melbourne University.

A COORDINATOR'S EYE

Monitoring an Active Volcano in Costa Rica

by Carlomagno Soto

Organization for Tropical Studies,
La Selva Biological Station GIS Lab.

As part of the “Pacific Ring of Fire”, Costa Rica is characterized by intense volcanic activity, which is affecting human productive activities. One of the volcanoes that this year has increased its activity is the Turrialba, located in the area of the same name, where the main activities are cattle ranching and agriculture.



Turrialba Volcano

Sites Emissions), which due to its small size will be used on UAV platforms as well as in field measurements.

Currently, the Gas Sensing Lab, School of Physics of the University of Costa Rica, together with researchers from various disciplines and NASA, are working to generate and analyze data from remote sensing and in-situ, to help monitor and understand the volcanic activity.

Among the instruments used, is the mass spectrometer ULISSES (Utilization of Lightweight in situ Sensors and remote sensing to study active volcanic



Field work

field and airborne, especially with helium and SO₂. This allows to correlate these measurements with data from remote sensors such as ASTER. Within the future plans of the project is the integration of this instrument, together with a multispectral camera onto an UAV platform designed and built by Maryland Aerospace Inc., in order to achieve a constant monitoring of the activity of the volcano, permitting a rapid response in case of emergency.

Time series of ASTER images onboard the TERRA satellite from 2000 until today, provided by the AVA (ASTER Volcano Archive) at the NASA Jet Propulsion Laboratory, will also be used in order to determine the areas affected by volcanic gases, and to evaluate the change of the temperature during periods of moderate and high activity. Preliminary studies have demonstrated that ULISSES is able to characterize the volcanic emissions, for measurements in the

Map Kibera

by Primož Kovačič and Mark Iliffe

Open Street Map, Ground Truth Inc.

The Kibera slum in Nairobi is a melting pot of life, commerce and culture. A place where population estimates range from 500,000 to 1,000,000 people living in an area of 2,5 square kilometers. Its landscape is one of the most researched places on earth, a bellwether for Kenyan politics and is representative of slums throughout Africa. This urban landscape has great relevance to the people who inhabit Kibera, government, non-governmental organizations (NGOs) and researchers. However it remained a blank spot on the map. Missing from Google Maps and presented as a forest on government maps, thus making the people living there invisible to the outside world.

Map Kibera was started in October of 2009 by Erica Hagen and Mikel Maron, with initial funding of the first phase by Jumpstart International, and the second phase by UNICEF. The Map Kibera pilot is the first project by GroundTruth Initiative, LLC, established in March 2010. The project is trying to address invisibility of up to one million of Nairobi's population and their absence from mass communication, as well as policy decisions. The Map Kibera project has since produced the first complete, free and open map of Kibera, worked with local media and community outlets, created online tools and built a platform for collecting and sharing information and reporting back via SMS.



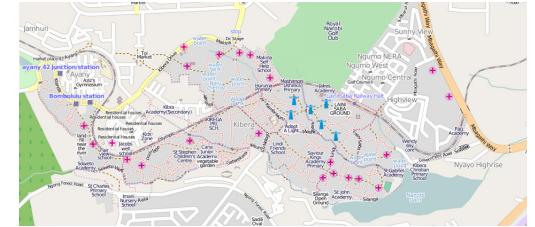
Kibera mappers

Technology and Methodology

Local motivated young people learned to create maps using OpenStreetMap techniques (<http://josm.openstreetmap.de>) which included surveying with GPS, digitization of satellite imagery and paper based annotation with Walking Papers. The OpenStreetMap project, grounded in community driven mapping, is an ideal base for Map Kibera. Where OpenStreetMap is designed to map the world, the Map Kibera project is designed to map a dense, concentrated area, mapping the characteristics important to the residents of Kibera. Individuals from the blossoming Nairobi tech scene helped train and make connections with the larger community. Data



Data collection with GPS and Walking Papers



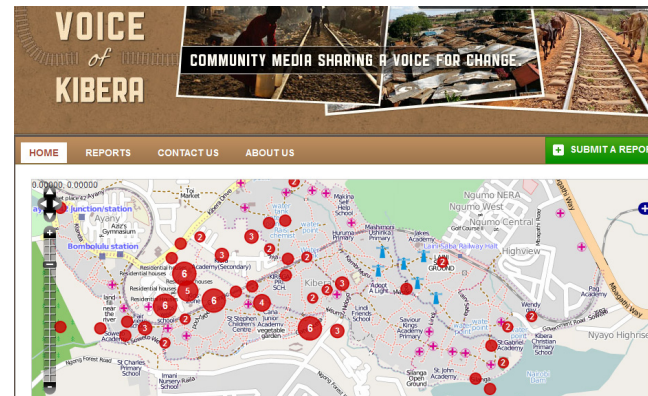
Kibera in OpenStreetMap

consumers were consulted for their needs, to help add directions to feature types collected, and aided in immediately making use of the map data.

In the second phase, mapping was expanded to acquire greater detail, focusing on health, security, education water and sanitation, seeking to create not only a useful map, but a tool that can lead to improved services for the most marginalized community members.

Data without a story has little life.

Map Kibera trained 20 Kiberan youth in the use of the Flip cameras and simple editing software, using a form of geo-located citizen journalism to provide a comprehensive picture of the local reality and support the achievement of community goals. An Ushahidi (Swahili for “testimony” or “witness”; see also <http://en.wikipedia.org/wiki/Ushahidi>) instance was launched at <http://kibera.ushahidi.com> called Voice of Kibera to allow community members to contribute community news to the map via SMS. This crowd-sourced feedback mechanism allows Kibera residents to comment on the map as well as use this information to advocate for better service provisions. Through participatory mapping, people gain new awareness about their surroundings,



Voice of Kibera platform

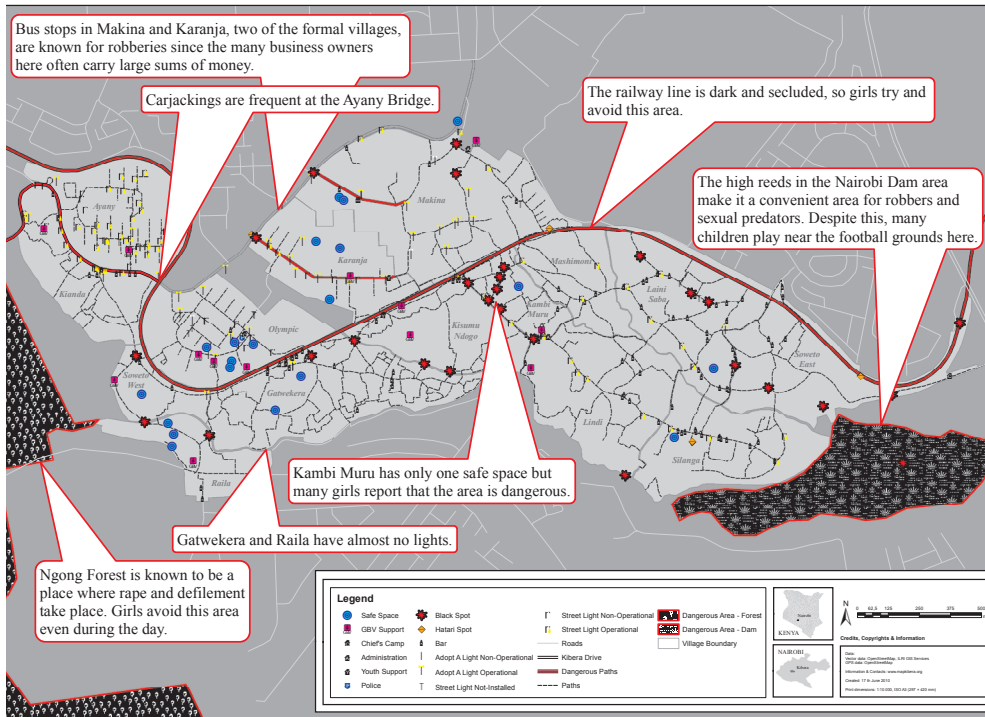
enabling and empowering them to amplify their voices on critical issues.

Outputs

This has resulted in a sustainable group of engaged citizens and journalists trained in data collection, mapping techniques and storytelling. Printed maps, SMS reporting, Ushahidi

and citizen driven media all contribute to a methodology that can be put to use throughout Kenya and the world.

Outputs of the project will be used to identify locations of service provisions and service providers, areas of psychological risk or vulnerability and patterns of risk perception. Further, the information will be publicly owned and available, helping to keep grassroots advocates and policy planners more accountable to people especially young people in the community.



Example of an output: Security situation in Kibera

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Photogrammetry or Laser Scanning?

by Thanasis Moysiadis,
University of Thessaly

The last part of the report outlines the combination of Photogrammetry and Laser Scanning in cultural heritage applications. Modelling a monument is not an easy task. There are many factors related to the methodology implemented, already mentioned in the two previous report parts, which have to be taken into consideration and influence the accuracy and precision of the final product.

On one hand, Laser Scanning offers many advantages due to rapid data acquisition and simple use of the instrument. Laser scanning instruments capture significant detail so they provide a dense and accurate 3D model of a monument. However, parts with complex surfaces are more difficult to model which is largely affected by the instrument specifications and calibration, the scan positions, the surface reflectivity, the algorithm used for the scan registration and the ability to handle large amount of data. Even if laser scanning is a very convenient solution in terms of time and data acquisition, the need of data editing due to occlusions is unavoidable. Therefore, significant manual and partly automatic editing is needed which is time consuming and limits the accuracy of these parts of the surface.

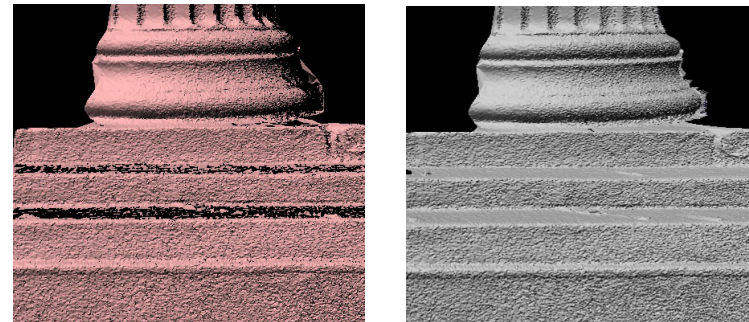


Figure 1: Data occlusion in the 3D laser scanning model (left) and after semi-automatic editing (right).

© Moysiadis, University College London

The use of targets on the monument surface before the scanning process provides control both for the Laser Scanning and the Photogrammetric model. Therefore, there is direct georeferencing between the two datasets.

On the other hand, Close-Range Photogrammetry provides correct geometric and texture information. More specifically, geometric patterns and edges appear in greater detail for those parts, where the laser scanner data has limitations. However, there is a good correlation in terms of geometry between Laser Scanning and

Photogrammetry. The use of non-metric digital SLR cameras is common due to their sufficient quality, ease-of-use, low cost and increased resolution. Camera calibration is a main factor before the photogrammetric processing. Using a dense image network geometry or stereopair configuration, as analysed in the first report part, a full 3D coverage of a monument can be provided. However, more camera positions are necessary due to the camera's smaller field of view compared to the one of laser scanners. Photogrammetric processing includes automatic stereo matching algorithms, which provide dense 3D information compared to standard manual plotting. Except for geometric information Photogrammetry also provides colour information, which can be used for a more realistic model.



Figure 2: Comparison between a laser scanning model (left) and an image taken from a similar viewport (right).
© Moysiadis, University College London

The main advantages and disadvantages of Photogrammetry and Laser Scanning are described below:

PHOTOGRAMMETRY

Advantages:

- The correct image geometry and increased resolution of photographic imaging produces an accurate and consistent model.
- Digital Photogrammetric packages with automatic processes can be used by non-photogrammetrists. However, deep theoretical background is needed in order to use them in such applications.
- Cheap digital non-metric cameras are widely used in Close-Range Photogrammetry.
- Automatic stereo matching algorithms provide rapid and dense 3D information of complex surfaces compared to manual stereopair digitising.

Disadvantages:

- Can be time consuming.
- Special software for such applications.
- Camera's field of view is by far smaller than the laser scanner's. Thus, more camera positions are needed compared to a laser scanner.

LASER SCANNING

Advantages:

- Large amount of 3D data in relatively short time.
- Increased accuracy.
- Instrument levelling ability permits automatic data georeferencing.

Disadvantages:

- High cost.
- Need of manual or semi-automated techniques where there are data gaps.
- Edges can not be accurately defined in the laser point cloud.
- Surface reflectivity causes systematic errors.

All in all, Close-Range Photogrammetry and Laser Scanning have been widely used in monument and building documentation. Each of them has advantages and limitations, however both are complementary to each other, therefore they can be used in combination for such applications.

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Annual Student Meeting RSPSoc 2010

by Matthias Kunz
ISPRS SC, UK Representative

This year's RSPSoc (Remote Sensing and Photogrammetry Society) Annual Student Meeting was held from 15.3. to 17.3.2010 in the Mount Batten Centre in Plymouth, UK. Over 30 students from across the UK came together in the sunny south of England to present their current work on posters and in oral presentations. Ranging from master level to final year PhD students the conference was held in a nice and relaxed atmosphere. It gave students a great opportunity to discuss their work with peers and for networking. A wide range of interesting research has been presented including mobile mapping systems, airborne and terrestrial lidar, radar applications and the use of modern earth observation satellites. Each day of the conference also included a keynote talk. Furthermore, an introduction to the ISPRS Student Consortium and the UK Polar Network has been given to get more students involved in national and international student driven organisations. The very enjoyable social events included water sports, a visit of the National Aquarium and a Pub Quiz with some really tricky questions.

This great student conference was organised by Bob Brewin (Plymouth University), the current RSPSoc student representative. Bob will hand over to Rob Parker (Durham University) who will be the next years student rep and bring the conference to the north of England in 2011. The best poster prize was awarded to Matthias Kunz (Newcastle University) and the best presentation was awarded to Susan Kay (University of Exeter).



Student Consortium Activity in ISPRS TC VI Symposium

ISPRS Technical Commission VI Symposium with the topic Cross Border Education for the Global Geo-information was held in ITC, Enschede-the Netherlands between 2 - 4 June. The symposium focused on several education topics specifically on, web-based education, e-delivery of educational services, frameworks for cross-border education, joint educational programs and promotion of the profession to students. Among the other session a discussion forum was carried on right after the presentations of the Student Consortium papers. In addition to the official program, a meeting between the student representative bodies of ITC and ISPRS Student Consortium with TC VI was organized to discuss the role of local student bodies and possible relations of promotion and know how transfer in various cases. The two day event was a good opportunity to establish new contacts, increase the presence of SC among academicians from different parts of the world. It also played a significant role to integrate the generations within the ISPRS. Student Consortium is looking forward to having more inputs and participation in the next TC VI Symposiums.

The **ESA** is organising **POLinSAR 2011**, the **5th International Workshop on Science and Applications of SAR Polarimetry and Polarimetric Interferometry**, which will be hosted in ESRIN, Frascati, Italy on 24-28 January 2011. For more info visit: <http://www.polinsar2011.com/>

9th International NCCR Climate Summer School
Grindelwald, Switzerland, 29 August – 3 September 2010
For more info visit:
http://www.nccr-climate.unibe.ch/summer_school/2010/

ISARA 9th International Symposium on Spatial Accuracy Assessment in Natural Resources & Environmental Sciences
Leicester, UK, 20-23 July 2010
For more info visit: <http://www.le.ac.uk/geography/accuracy/>

GIslands 2010 - International Summer School 2010
Ponta Delgada, Azores Islands, Portugal, 7-12 August 2010
For more info visit: <http://www.gislands.org/>

5th ESA/ENVISAT Earth Observation Summer School on Earth System Monitoring & Modelling
Frascati, Italy, 2-13 August 2010
For more info visit: <http://envisat.esa.int/envschool/>

GeoWeb 2010
Vancouver, Canada, 28-30 July 2010
For more info visit: <http://geowebconference.org/>

ISPRS Commission VIII Symposium "Remote Sensing Applications & Policies"
Kyoto, Japan, 9-12 August 2010
For more info visit: <http://www.isprcom8.org/>

ISPRS Commission III Symposium "Photogrammetric Computer Vision & Image Analysis"
Paris, France, 1-3 September 2010
For more info visit: <http://pcv2010.ign.fr/>

This column serves as a guide for the students who are thinking or are willing to go studying or doing practical work abroad. We have searched for new opportunities in different faculties, schools and other learning programs all over the world in order to encourage as many students as possible to take new steps towards new horizons.

The International Masters Program (Master of Science, M.Sc.) in **Geospatial Technologies** is a cooperation of the **University of Münster** (Germany), **University Jaume I** (Spain) and **New University of Lisbon** (Portugal). It has been selected within the Erasmus Mundus Program of the European Commission (2007-0064/001 FRAME MUNB123). Regarding the 2010/2011 edition, for students not applying for an Erasmus Mundus grant but for regular admission to the Masters program, the **deadline** for application will be **July 31st, 2010**. Read full announcement at: http://geotech.uni-muenster.de/index.php?option=com_content&view=article&id=29:call-for-applications-application-system-open&catid=1:news

The Joint Research Centre (JRC) in Ispra, Italy invite application on different positions (**Jobs, PostDoc positions, Traineeship, etc.**). The mission of the JRC is to provide customer-driven scientific and technical support for the conception, development, implementation and monitoring of European Union policies. They provide scientific and technical assistance in a wide range of fields, including those relating to the **environment, consumer protection, energy, nuclear safety and security, agriculture and external relations**. For more info visit <http://ec.europa.eu/dgs/jrc/index.cfm?id=3720>

A **full-time position** is available from **1st September 2010** at the **Photogrammetry and Remote Sensing group** (Prof. Dr. Konrad Schindler) of the **Institute of Geodesy and Photogrammetry, ETH Zurich**. The main task will be the participation in current research projects and teaching duties of the group within the curriculum **Geomatic Engineering and Planning**. The successful candidate will undertake independent high-level scientific research in photogrammetry, remote sensing and computer vision aiming at a Ph.D. thesis within approximately 4 years. The teaching duties include support and supervision of students in lectures, exercises and labs, seminar projects as well as Master- and Bachelor-Theses, and exams. Candidates should hold a university degree (Master/Diploma in Engineering or equivalent degree) in Geomatic Engineering or related disciplines (e.g. Computer Science, Electrical or Electronic Engineering, Mathematics, Physics). Further requirements are a high degree of initiative, good mathematics and programming skills, and proficiency in English (written and spoken). Knowledge of German is an additional advantage. For additional information about the position and the tasks, please **contact Prof. Konrad Schindler, +49-6151-163413, konrads@ethz.ch**. Full announcement at <http://internet5.refline.ch/845721/1041/++publications++/1/index.html>

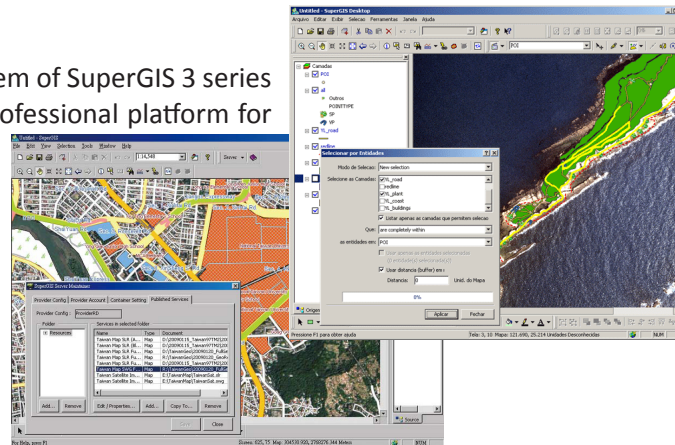
The **Norwegian Centre for International Cooperation in Higher Education (SIU)** is a knowledge- and service organisation with the mission of promoting and facilitating cooperation, standardisation, mobility, and the overcoming of cultural barriers to communication and exchange within the realm of higher education on an international level. The goal of the Quota Scheme is to give students from developing countries in the South, Central- and East-Europe and Central-Asia, relevant education that would also benefit their home countries when they return after graduation. The Norwegian government provides **scholarships** for students from developing countries in the South and countries of Central- and East-Europe and Central-Asia under the Quota Scheme. The **deadline** for applying is **December 1st each year**. For all the application procedures, Institutions that are under the Quota Scheme and all other info please visit: <http://siu.no/en/Programme-overview/Quota-Scheme>

IT NEWS

SuperGIS Desktop 3

SuperGIS Desktop 3, the desktop geographic information system of SuperGIS 3 series products, has plentiful GIS tools to offer GIS experts a GIS professional platform for geoprocessing and displaying, editing, managing, querying and analyzing geographic data. SuperGIS Desktop 3 greatly enhances the performance in editing, displaying and geoprocessing and strengthens the data interoperability with various databases and supports of OGC standards.

Source: http://www.supergeotek.com/store_SuperGIS_3.aspx



Geomagic 12

Geomagic Studio transforms 3D scan data and polygon meshes into accurate 3D digital models for reverse engineering, product design, rapid prototyping and analysis. A fast way to convert 3D scan data into parametric models, Geomagic Studio directly integrates with leading mechanical CAD packages. Geomagic Studio offers parametric modeling capabilities as well as features for capturing exact geometry, giving you the power and flexibility to choose the modeling method. Geomagic Qualify enables fast, accurate, graphical comparisons between digital reference models and as-built parts for first-article inspection, production inspection and supplier quality management. Delivering best-in-class reporting capabilities, Geomagic Qualify's powerful yet simple report designer allows you to design and customize inspection reports to meet the requirements of your organization.

Source: <http://www.geomagic.com/>



ArcGIS.com Portal

<http://www.arcgis.com/home/>

OpenAerialMap Project

<http://openaerialmap.org/>

Geospatial Revolution Project

<http://www.geospatialrevolution.psu.edu/>

RESOURCES

Annotated GIS Bibliographies

<http://dusk.geo.orst.edu/gis/bibs.html>

FREE SOFTWARE

BEAM is an open-source toolbox and development platform for viewing, analysing and processing of remote sensing raster data. <http://www.brockmann-consult.de/cms/web/beam/welcome>

JOBS, CAREER OPPORTUNITIES

GetGISJobs

<http://www.getgisjobs.com/>

GeoSearch

<http://www.geosearch.com/>

JOURNALS

Earth Magazine

<http://www.earthmagazine.org/>

RELATED ORGANIZATIONS, ASSOCIATIONS

Online Access to Research in the Environment (OARE)

<http://www.oaresciences.org/>

Invitation to Join ISPRS SC Society

Please visit our SC web page www.isprs-studentconsortium.org where you will find more information about Student Consortium, our previous Newsletter issues, SC activities, photo galleries from previous Summer Schools, interesting links etc.

You can also register to our website. Just click on members area and receive ISPRS SC Newsletters, information about special student offers and grants, information on practical training, academic exchange and etc. within the related fields of ISPRS. Of course, by registering you can decide if you want to participate actively or not. In any case you are more than welcome to join SC community!

Our previous Newsletter issues

