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TUESDAY 19 JULY 2016

ISPRS Congress Daily

Gala Evening: Awards Evening

Did you all enjoy the Gala last night? It was a great time for additional celebrations! Awards had already been presented at various occasions during the ISPRS Congress like the Opening Ceremony and the Plenary Sessions. Yesterday evening, the Frederick J. Doyle Award and the Giuseppe Inghilleri Award were presented, together with the Young Authors Awards.

The Frederick J. Doyle Award – for an individual typically aged under 50 years who has made significant accomplishments in advancing the photogrammetry, remote sensing and spatial information sciences and technologies - was presented to Wolfgang Wagner, TU Vienna, Austria, for his 'outstanding scientific contributions in active remote sensing, combined with his strong leadership role in science management, administration and in international organisations'.
Sander Oude Elberink, geodetic engineer from Delft University of Technology, the Netherlands, was presented the Giuseppe Inghilleri Award, sponsored by the Italian Society for Surveying and Photogrammetry (SIFET). This award laureates him as having significantly contributed to the applications of photogrammetry, remote sensing or spatial information sciences in the 4 years preceding to this congress, having contributed to high-quality and innovative research in 3D landscape modelling that has successfully been transferred to practice to serve the society.

Best Papers by Young Authors were also awarded during the Gala evening. One author was chosen from each Technical Commission.
TC I: Yuanxin YE, China; HOPC: a geometric structure similarity metric for automatic matching of multi-model remote sensing images
TC II: Christian Kehl, Norway; Direct Image-to-Geometry Registration Using Mobile Sensor Data
TC III: Andreas Ley, Germany; Reconstructing white walls: multi-view, multi-shot 3D reconstruction of textureless surfaces
TC IV: Constantin-Ioan Nandra, Romania; Defining earth data batch processing tasks by means of a flexible workflow description language
TC V: Ana Djuricic, Austria; 3D Central Line Extraction of Fossil Oyster Shells
TC VI: Raechel Bianchetti, USA; A Cognitive Approach to Teaching a Graduate Level Geobia Course
TC VII: Benson Kipkemboi Kenduiywo, Germany; Mapping crops from a sequence of TerraSAR-X images with dynamic conditional random fields
TC VIII: Katalin Kiss, Finland; Comparison of high and low density airborne Lidar data for forest road quality assessment

5 questions to... Nicolas Paparoditis, ISPRS 2020 Congress Director

The ISPRS Congress is in full swing. How did you experience it until now?
Lena Halanouva, the current congress director has done a great job. It's a lot of work and this work has definitely paid off when you see all the delegates smiling as you walk around.

You won the bid to host the 2020 ISPRS Congress. How do you feel about this?
Actually quite relieved and already at work :). Indeed, it was our second bid in a row and thus the pressure was probably higher on us than for the two other bidders. I must confess that the recent events in Nice made it a difficult time for us during the competition but life goes on and these events should not change our way of living and behaving. I would like to warmly congratulate the two other bidders for the hard time they gave us and for defending so well the colours of their countries. I encourage them to continue and wish them all the best for next time.

What are you going to take away from the ISPRS Congress 2016?
All of it! Indeed, congresses and other ISPRS events are in constant but continuous evolution. We will build upon and continue what has already been done. Some nice technologies and new ideas were introduced here in Prague, and we will develop them to better fulfil the needs of our ISPRS community.

What is your opinion on the current status of the photogrammetry and remote sensing community?
Photogrammetry, remote sensing and spatial information sciences are in permanent and rapid change due to the extremely fast evolution of technologies. We are facing new important challenges, e.g. multiplication with new platforms and sensors acquiring earth observations with multiple scale, spectrum, and points-of-view, autonomous digitisation and navigation, Big Data processing, volunteered geographic information, Big Data visualisation and analytics, and of course also education that has to deal with this constant evolution of methods, algorithms and technologies. These new challenges come together with strong opportunities for our community which makes it even more exciting being part of it as a scientist, as a solution maker, or as a decision maker.

Nicolas Paparoditis.

Read the full interview at gim-international.com/isprs

Conference Director Reports

During the General Assembly on Monday afternoon, Congress Director Lena Halounova reported on this event. This ISPRS Congress in Prague welcomed 2,294 participants from 88 countries. There were 710 contributions submitted by young authors. China was the country of origin of most delegates, followed by Germany and the host country, the Czech Republic.

The exhibition that took place on the second floor during the first days counted 77 participating companies. That makes this ISPRS Congress a great place to share knowledge, learn, meet fellow scientists and professionals working with geospatial technology!

COLUMN

Continued urbanisation worldwide and associated environmental impacts have caught great attention in the remote sensing community and beyond. Earth observation technology, in conjunction with in situ data collection, has been used to observe, monitor, measure and model many of the components that comprise urban environmental systems and ecosystems cycles for decades. There are a number of satellite remote sensing systems capable of imaging urban areas to the details needed for global assessment of urban systems. More capable satellite systems for establishment of a global urban observatory are under development and will be launched in the near future. International collaboration is needed to produce consistent global maps of human settlements from various data sources, to validate data products, and to provide harmonised information through a common land cover classification system for urban areas. The Group on Earth Observation (GEO) has developed a global land (SB-02) and a global urban observation (SB-04) task. Both tasks have been proposed to be included in the GEO 2016-2025 work plan. We should create opportunities to discuss synergies in datasets, products, resources, applications, benefits and future activities and goals between the two tasks and encourage interested researchers to join GEO. Several global land cover datasets have been developed. The utility and merits of those datasets for mapping, assessing and monitoring global urban areas deserves to be explored. It is also be fitting to explore how existing urban datasets can be used to enhance and integrate into global land cover mapping.
The following science questions come in mind:
- Based on the lessons learnt from global land cover mapping, how can the requirements be defined for global urban mapping, assessment and monitoring in terms of data products and expectations for data validation, archiving, update and sharing?
- How do existing global land cover datasets help to create a global urban morphological database for urban land change monitoring / assessment and climate modelling?
- How can urban indicators be developed by linking EO data and global land cover data products with socio-economic and in-situ data to improve knowledge of urban ecosystems, environments and sustainable cities?
- What contributions can global urban data products make to enhance global land cover mapping?
This would just be an introduction providing insights into the existing practices, problems and future prospects.

Qihao Weng, Indiana State University, U.S.A.

Measuring Spatial Developments in the Czech Republic

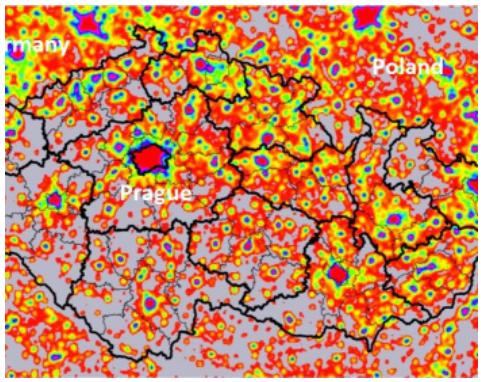
A country's local spatial development can be derived from socio-economic indicators assigned to administrative units. Proper management and monitoring often require statistics at a more detailed level. However, it is difficult if not impossible to sub-aggregate the statistics to smaller areas than administrative units.

A reliable alternative is to measure the intensity and extent of night-time illumination and the changes over time. Read on for details of a project based on two indicators derived from satellite night-time images for monitoring local spatial developments in the Czech Republic.

Based on analysis of satellite images of the Czech Republic captured at night, the first development indicator identifies the increase or decrease in the amount of light over time and the second indicator identifies year-on-year changes. As the amount of night--time light is computed per grid cell covering an area of 0.55 square kilometres, which can be aggregated into any spatial extent and thus spatial detail, the indicators can be computed for small spatial units (see the image). Both indicators enable the determination of intraregional development over time but do not allow interregional comparisons.

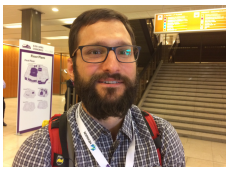
Find the full article on gim-international.com/isprs

In contrast to socio-economic statistics, space imagery of nocturnal light emissions enables development spots to be identified within administrative units.



Participants Have Their Say

As this is the last day of the ISPRS Congress 2016 in Prague, it's also time to look back! A week of learning, presenting, managing and decision-making at the General Assembly, showing new technology at the exhibition, seeing equipment up close with Leica and HERE who had their cars outside, and of course meeting colleagues. What did you think of the conference? We asked the delegates!



Jachym Cepicky, Czech Republic

"I'm impressed with the event! As a developer, I was able to add to my knowledge and participated before in the FOSS4G conference. There must have been more than 2000 people – and yet it's still easy to get around. More importantly: I was able to meet all the people I wanted to see. The programme was rather academic but gave me good insight into what is happening."

Prof. Martin Kada, Germany

"This congress is well organised, and covered a lot of topics. I like the idea that the plenary sessions were recorded and that they have been published on the website. This means that even people who were unable to attend sessions can see them. Or look at the sessions again if they did attend. The venue is nice for this kind of event."

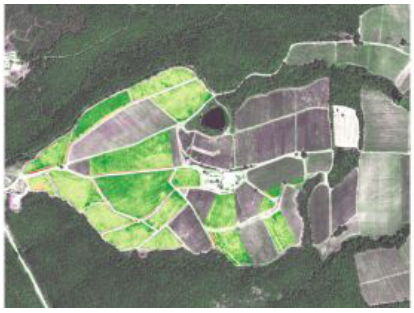
Three Events in Hannover

The ISPRS Hannover Workshop 2017 will feature three events: High-resolution Earth Imaging for Geospatial Information (HRIGI17), City Models, Roads and Traffic (CMRT17) and European Calibration and Orientation Workshop (EuroCOW17). So save the date in your diary: 6-9 September 2017, and follow the updates online at ipi.uni-hannover.de/hrigi17.

The Hannover Rathaus. Image courtesy: Wikipedia.

Wine Improves with Very High-resolution Satellite Imagery

Researchers in Greece reveal that using satellite imagery can improve the quality of wine and help manage the grape harvest. In a recent case study published by European Space Imaging – Multispectral VHR Imagery Supports Crop Management in Vineyards, the Remote Sensing Laboratory at the National Technical University of Athens, Greece explains the benefits of using pan-sharpened, multispectral WorldView-2 satellite imagery for improving grape quality.



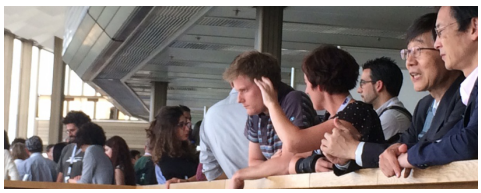
Canopy greenness map over Naoussa in 2015 derived from WorldView-2. Grape variety Ksinomavro. Image courtesy: Euro Space Imaging

They tested the data information quality in four vineyards in northern Greece comparing data gathered on the ground with the information collected via the satellite sensor at the same time on the same day with the aim of understanding if there is a benefit using Earth observation data.

Normally grapes need to be tested throughout the growing season by people walking through the fields using handheld spectrometers. The data collected is used to determine when nutrients, pesticides and additional water should be applied to optimise grape growth. But gathering this way is a slow process, expensive and it is hard to analyse the whole field at once.

Find the full article on gim-international.com/isprs

Last Day - Not the Least!



The last day of the ISPRS Conference 2016 will be just as interesting as the previous days! It will have attractive sessions in the morning! So go to the Club rooms for sessions on Satellite systems for earth observation; Mobile scanning and imaging systems for 3D surveying and mapping; Close-range measurements for biomedical sciences and geosciences; a Russian session on Advances of photogrammetry, remote sensing and spatial information systems in Russia; FOSS4G; GEO: Earth observation from global land to urban systems; Methods for change Detection and Process modelling or GlobeLand 30.

In the afternoon, the closing ceremony will take place starting at 1:30 pm. This is always an impressive part of the conference. There are more awards waiting to be presented: the President's Honorary Citations, the CATCON Award, the award for the best poster papers and the award for the best papers of the Youth Forum.