

News section

Workshop ‘Optical measurement techniques for applications in mechanical engineering’

Geodetic Institute, University of Karlsruhe, 19 October 2007

In October 2007 the first workshop ‘Optische Messtechnik für Anwendungen im Maschinenbau’ was held at the Geodetic Institute, University of Karlsruhe under the direction of Prof. Maria Hennes. One main goal was to establish a common platform for geodesists and mechanical engineers to exchange their experiences and ideas with focus on modern optical metrology (e.g. lasertracker) and measurement processes in industrial manufacturing like quality

control of vehicle components. Consequently the workshop addressed target groups as well from universities as from engineering companies and industry. The one-day event was divided into lectures and practical hands-on-demonstrations and attracted approx. 60 participants coming from several universities like RWTH Aachen and TU Dresden and companies (e.g. Daimler AG) in equal shares.



The lectures gave a broad and competent overview of the current state of the art in modern optical metrology and showed very clear the connection with industrial applications. They were structured in more theoretical topics like the specification of metrological requirements for industrial control processes and the quantification of measurement uncertainty in mechanical engineering and in practical examples from production and construction processes. The presentation of GUM (= Guide to the Expression of Uncertainty in Measurement) pointed out the need for a common and interdisciplinarily accepted description

of measuring errors but also showed that we are on the right way to solve this task. Presentations of quality control in automotive engineering (e.g. with lasertrackers, -gauges and -triangulation sensors) and the use of laserscanners in reverse engineering (e.g. amusement-rides systems like rollercoasters) emphasised one central message from Prof. Hennes that modern optical sensors are more and more important for a cost-efficient control of production processes. They also showed the chances for engineering geodesy to participate in this trend.



The hands-on-demonstrations were divided into three topics: object reconstruction with lasertracker and close-range scanner, reduction of disturbance influences on measurements (focus on temperature influences) and kinematic measurement techniques (e.g. for deformation monitoring). The sophisticated concept organized the demonstrations into single steps from preliminary preparations over measuring to processing and visualisation of final results. It enabled the participants to easily understand the processes and to apply the learned stuff in small lab projects.

The whole workshop was framed by an excellent organization with detailed course-documents and a very cooperative and competent organizing commit-

tee. The coffee breaks enabled lively discussions with our colleagues from industry and the visit of diverse company presentations. Finally I went home with the good feeling to have seen and learned a lot of interesting stuff. The results from the evaluation sheets which were distributed at the end of the workshop clearly showed that the other participants shared this feeling with me. So I am looking forward to the next workshop which is planned to take place in October 2008.

Andreas Eichhorn

Engineering Geodesy, Vienna University of Technology

4th International Symposium on LBS and TeleCartography

Hong Kong, P.R. China, 8–10 November 2007

The 4th International Symposium on Location Based-services (LBS) and TeleCartography was held at the Hong Kong Polytechnic University, P.R. China, from 8 to 10 November 2007 in celebration of the university's 70th anniversary. It was organized by the Department of Land Surveying and Geoinformatics of the Hong Kong Polytechnic University and the Cartography and Engineering Geodesy Research Groups of the Vienna University of Technology in

cooperation with the ICA Commissions on Maps and Internet and Ubiquitous Cartography, the IAG Working Group WG 4.1.2 on Indoor and Pedestrian Navigation and the ISPRS WG II/5 on Communication and Visualization of Spatial Data. The conference was attended by 84 participants from 16 countries from Asia, Europe, Australia and USA. Over 50 papers were presented in 9 technical sessions and one poster session.



After welcome addresses from Prof. Chen Yong-Qi, Head of the Department of Land Surveying and Geoinformatics of the Hong Kong Polytechnic University, Prof. Georg Gartner, Head of the Research Group Cartography of the Vienna University of Technology, Ass.-Prof. Guenther Retscher, Chair of the IAG Working Group 4.1.2, Prof. William Cartwright, President of the ICA, and Prof. Wolfgang Kainz, Representative of ISPRS, two keynote speeches were given by Prof. Jonathan Raper from the London City University, UK, and Prof. Chris Rizos from the University of New South Wales, Sydney, Australia, in the opening ceremony. In his keynote Prof. Jonathan Raper spoke about “Understanding Location Sensitivity” and Prof. Chris Rizos

about “Geopositioning Technologies to Support LBS: Some Observations on the Future”. Then on the first day sessions on “Ubiquitous Cartography”, “Awareness” and “Indoor Positioning” were held followed by a presentation of the main sponsor of the conference Leica Geosystems about “Ubiquitous RTK – Contribution of GNSS Network Positioning Infrastructures for LBS Applications” given by Mr. Joël van Cranenbroeck from Leica. The second day of the conference saw sessions on “Positioning in LBS”, “Mobile User Analysis”, “TeleCartography” and “3D”. On the third day two sessions were held, i.e., one “Modelling and Applications” and “Applications”, parallel to a poster session.



The social events included a welcome reception on the evening of November 7, 2007 and a conference dinner on the first day in a seafood restaurant in

Lamma Island including a boat trip through the beautiful Victoria Harbour along the night skyline of Hong Kong.



The conference proceedings were published on CD-Rom and can be obtained by contacting lsgilbs2007@polyu.edu.hk. For further information about the symposium please see also the conference website at <http://www.lsgi.polyu.edu.hk/LBS2007>.

Due to the success of the meeting it was decided to organize a 5th symposium on LBS and TeleCartogra-

phy which will be held in Salzburg, Austria, from November 26 to 28, 2008. For further information about this symposium visit <http://www.lbs2008.org>.

Günther Retscher

Engineering Geodesy, Vienna University of Technology