

SUMMARIES

Elżbieta Jasińska, Edward Preweda: **Methods of selecting factors in the analysis of the real estates market** • Geodezja • Tom 12 • Zeszyt 2 • 2006

In the paper the problem of selecting the method of choosing factors in factorial analysis is presented. For the database of 61 real estates the process of singling out the factors was carried out with the use of all the methods proposed in the STATISTICA 6.0 pack. A particular attention was paid on the number of differentiated factors and the efficiency of subsequent methods for the analysis of the real estates market.

Keywords: analysis of real estates market, factorial analysis

Adam Bałut: **Preliminary analysis of the ESP Żar horizontal control network point displacements** • Geodezja • Tom 12 • Zeszyt 2 • 2006

The horizontal control network of the Żar hydropower facility is observed by the GPS technique since 2001. Comparison of results of five annual resurveys proved stability of the main observation pillars, used as a reference for determination of dam displacements and deformations. The network extends for about 5 km outside the artificial lake and stretches a probably active tectonic fault. The span of four years allowed determination of a 0.5 ppm/y compression in the area in the direction NE-SW, which does not contradict geophysical evidence.

Keywords: GPS, deformation measurements, neotectonics

Jerzy Bernasik, Sławomir Mikrut: **The automation of photogrammetric measurements of the roof cranes deflection in industrial halls** • Geodezja • Tom 12 • Zeszyt 2 • 2006

The determination of the roof cranes deflection is the generally measurements in the industrial halls. The measurements is inhibited by particular condition of the operation in high industrial halls: movements and vibration (if the production is not stopped), the movements of the different conveyance and dust. If the production is stopped still remain the problems with high, danger (high voltage), weak lights, inhibit access and time restriction. Due to problems of leveling measurement the deflection of cranes in high halls, the one-images photogrammetric method is very often the best. It was use in analogue version. The digital photogrammetry shows the new possibility. In this paper three methods are presented: analogue, digital-analogue (the scanned images measurements on the photogrammetric station), and automatic image processing. The description of used technologies made rich about conclusion and recommendation for the next performers. The results of the experimental measurements and their accuracy are presented. Presented results allows to treat these described photogrammetric method as fully useful and value in accuracy. The advantages of the digital technology particular allows to recommend its for universal use.

Keywords: digital photogrammetry, automation, measurement of the deflection

Jan Gmyrek: **Network influence on the setting out accuracy without additional observations** • Geodezja • Tom 12 • Zeszyt 2 • 2006

The paper refers to derivation of the formula containing the influence of a network inaccuracy on the accuracy of setting out. The formula (16) refers to setting out without additional ob-

servations. In this case the observation matrix must be square, and must have an inverse matrix. The first part of formula (16) contains only the influence of accuracy of the setting out and the second part contains the influence of network accuracy. Besides a general case of derivation of the both parts of the formula (16) was presented.

Keywords: an accuracy of setting out

Anna Hajduk: Selection and analysis of parameters needed for valuation of recreational property • Geodezja • Tom 12 • Zeszyt 2 • 2006

Property market is a place where rights and duties of owners are being put to profit. Analysis of property market is identifying the mechanism of its operation, structure, condition and development of its elements. Market analysis enables taking accurate and rational decisions that is why it is a very important stage in many fields connected with property market. Statistic analysis conducted with appropriate programs makes it possible to assess the importance of features and factors shaping recreational property market. Econometrics model as well as the procedure of studying the structure of community has an important bearing on isolating fundamental traits which affect value of property.

Keywords: property, mathematical model, statistic analysis

Beata Hejmanowska: Validation of measurement of land parcel areas on orthophotomap • Geodezja • Tom 12 • Zeszyt 2 • 2006

In the paper chosen results of the UE project Validation of methods for measurement of land parcel areas are presented. The project was realized and coordinated at the AGH in Kraków. During the project 3 measurement experiments were performed: 2 remote sensing (AGH Kraków) and 1 GPS (UWM Olsztyn). The experiment was prepared and statistical analyzed at USI Gembleux. The aim of the study was to elaborate the validation method for land parcel measurements. In the paper short discussion of the existing approach is presented and alternative method proposed by author is described. Results of remote sensing experiments are shown. Point position error, characterizing measurements technique, was assumed as a parameter for area accuracy assessment. In RS experiments airborne and satellite orthophotomaps, with pixel size of 0.2-2.5 m were applied. 36 land parcels were digitized by 6-12 operators. In experiment 1 - 3888 measurements were made (1296 - in experiment 2). Data were according ISO 5725 analyzed. For VHR orthophotomaps (pixel size 0.2-1 m) we obtained the point position error of ca. +/- 2m. For EROS and SPOT (pixel size 2 and 2.5 m) point position error was ca +/- 5 m (Fig. 3). An optimal measurement set for proposal of validation method for RS is: 30-40 parcels, 3 operators, 3 days and 3 repetitions.

Keywords: orthophotomap, IACS, validation, land parcel area

Anita Kwartnik-Pruc, Barbara Ruchlewicz: Decision on ground development conditions in the process of real estate division • Geodezja • Tom 12 • Zeszyt 2 • 2006

The regulations of division of real estate used to encounter difficulties in the past when there was lack of a development project. That is why, the regulations of act of husband of real estate regulate this problem in detail. The decision on ground development conditions was included in the process of division of real estate as a substitute of the development project. This

document presents the role of this decision in the process of division of real estate until 22 September 2004 when the regulations were amended, and changes applied in the process, taking into consideration the obstacles arising from limited possibilities to include the decision on ground development conditions in this process.

Keywords: division of real estate

Michał Strach: **Application of Bentley software to design rail infrastructure**

• Geodezja • Tom 12 • Zeszyt 2 • 2006

The recent years brought an immense improvement in the modernization and precision of the measuring methods. Such tendency has been mainly fuelled by development of the IT and electronic technology by application of a modern software enabling automation and rapidity in sorting out the faced problems. The issue of a main concern in projection of the Railway Infrastructure involves the methods of optimization and accelerating the movement of trains. The purpose of the article is to present in a detailed way the functionalities of the most common tool in doing so – software developed by the Bentley Systems Inc. – InRail. The author of the article deals with track design functionalities of the applicable software and additionally presents an example of its precision in a railway alignment of the existing railway section.

Keywords: rail infrastructure design, railway track alignment, Bentley software, InRoads, InRail

Andrzej Uznański: **Methods of positioning with RTK GPS** • Geodezja • Tom

12 • Zeszyt 2 • 2006

The paper presents recent RTK GPS positioning methods resulting from the development of the surveying technique towards extension of its range. Problems related to positioning within networks of reference stations, based on VRS and FKP data, as well as problems related to transmission of reference station data using the Ntrip protocol in EUREF-IP, are discussed. Worldwide experiments published by numerous authors point to the possibility of obtaining accuracy on single-centimetre level even with 30-100 km long vectors.

Keywords: real time kinematic surveys, virtual reference stations, FKP, Ntrip

Janusz Dąbrowski: **Jarosław – the city of past and future** • Geodezja • Tom 12 •

Zeszyt 2 • 2006

In this monograph was given a short history of the town of Jarosław. The main subject is the process of saving the old town by the team of scientists from Akademia Górniczo-Hutnicza in Kraków together with the mining company from Bytom. That was here in Jarosław, where for the first time the new Z-S method was applied, in order to protect a three-storey underground basements against rain water destroying the buildings of the old town. Thanks to those specialist works not only the old town was saved, but also on the first of June 1984 150 meters of Tourist Underground Route was opened to the public. The article contains both information about costs of those protection works in years 1956-1996 and the details about the reception of The Jarosław Area Revitalization Programme in years 2005-2013 by Jarosław town council.

Keywords: the town of Jarosław, Underground Touristic Route, historical monument, save mining works, Council of Monument's Conservation