1. Dr. Pham Thi Hoa: *Surveing of interpolation methods for determining terrain effect in deflection of the vertical.*

Abstract

The paper surveys the reliability of interpolated results concluded from different interpolation methods of terrain effect on the deflection of points inside the calculated net based on comparing with the results of directly determinate method. The results from four representative mountainous areas show four reliable interpolation methods. Thus, the paper includes that interpolation methods should be used to determine terrain effect in the deflection of points inside the calculated net in Vietnamese condition.

2. Dr. Vu Danh Tuyen, Dr. Trinh Le Hung: *Studies of land surface temperature distribution using thermal infrared image LANDSAT data.*

Abstract

Land surface temperature is one of the most important factors in urban climatology studies and human - environmental interactions. Warmer air in urban areas - urban heat island is a pressing issue for all big cities. In the study, an attempt has made to estimate surface temperature over Hanoi area using LANDSAT ETM satellite data. With 60-meter spatial resolution, thermal infrared image LANDSAT ETM performance has effective application in region study. The methods of correcting surface temperature based on the relation with surface cover and types of land use have taken into consideration.

3. Dr. Dinh Xuan Vinh: *Assessment method of the stability of reference points in monitoring deformation of construction.*

Abstract

Confirming the stability of reference point is one of the main problems in deformation analysis. There is no guarantee that the reference point is always unchangeable over time. The paper represents the first norm minimization method of the reference point's displacement vector for locating unfixed reference points. Minimizing the first norm of normal equation's root has also been the conditions to solve the problem of free network adjustment. Estimation and statistical testing of their displacements have resulted in identifying unstable reference points.

4. MSc. Nguyen Thai Chinh; MSc. Le Thi Nhung: *The reasonable relationship between the accuracy of angular measurement and the accuracy of liner measurement in horizontal control networks.*

Abstract

To design angular linear horizontal controlling networks, it is essential to define the relationship between the angular error and distance/length error in the networks suitably. This not only builds networks with high accuracy but it has economic significance as well. The article conducts a survey on two model networks, namely central polygonal and quadrilateral. It also shows the appropriate relationship between the accuracy of angular and linear measurements in horizontal networks.

5. MSc. Nguyen Xuan Thuy: *Method to determine space location variation of GPS points based on remeasure results of gps network in two cycles remeasure.*

Abstract

The article focuses on theoretical foundation and carries out experimental calculations about adjustment principles of free GPS network to define the stability of GPS points based on remeasurement result of GPS network in two cycles. The result indicates that GPS technology completely meets modern requirements in determining the movement of the Earth's crust. In case of studying the movement of the Earth's crust in the scope of a territory or a nation, the adjustment principles of free GPS network turns out to be very effective in identifying fixed and unfixed points as well as movement vector of unfixed points between two remeasurement cycles.

6. Dr. Nguyen The Cong: Researching method to data exchange through shapefile.

Asbtract

Shapefile is a data structure given by ESRI, which is considered as a standard of familiar and popular spatial data format of the GIS application. To construct and make best use of database, we often use the ESRI software to create shapefiles directly or convert data into shapefiles from other formats. However, shapefile is a binary file and direct access. Thus, we need to know the record structure and the data type when reading or creating shapefile. In particular, the byte order in shapefiles is saved in two types of Big endian or Little endian. To solve this problem, the paper has carried out a research on the shapefile structure and its conversion technology between Big and Little endian. Research results also present methods of writing computer programs for data exchange by directly reading or creating shapefiles.

7. Dr. Nguyen Thị Hai Yen; MSc. Tran Xuan Bien: *The relationship between land use planning and planning of building new rural areas (Appication in Xuan Quang commune, Chiem Hoa district, Tuyên Quang province).*

Abstract

Currently, in addition to the implementation of national target programs to build new rural areas, the local government also executes other projects, such as land use planning, construction planning, etc… The role of land use planning at communal level cannot be denied. Yet, during implementation process, we are facing a number of pressing problems including the overlap of projects, which are conducted at different points of time and managed by various agencies. Therefore, the implementation process seems to be lack of synchronization and consistence. Moreover, land use planning at communal level is neither appropriate to reality nor synchronous in comparison with criteria of constructing new rural areas, which is a national target. Thus, types of planning at communal level should have consistent relationship and close coordination.

8. Dr. Trinh Huu Lien: *Technical establishment land prices zone and relation between land prices areas land prices for solving land valuation mass with mass market price survey.*

Abstract

Supporting technique for mass land valuation close to reality is an objective demand. Mass land valuation is a basis for building land price index and land price bracket of the local. Nevertheless, in real practice, land value of each parcel needs to be close to the market price to ensure land users' fairness and transparency in performing their duties and benefits. For this reason, the study of theoretical and practical issues along with some specific techniques in valuating mass land is extremely essential. The paper shows that theoretical solution – oriented techniques, proven practices in the area

of a ward and methods of each parcel's mass land valuation as well as land valuation in conditions of comparable models in an area at the time of valuation are not adequate to represent the zone of the studied ward. By mean of building techniques and analysis of land value as well as the correlation between land price and land value in service areas identified in the correlation, the task of mass land valuation close to the price market in that area is solved.

9. Dr. Huynh Phu: *Method for calculating WQI index to assess the water quality status of Cai river - Phan Rang, Ninh Thuan.*

Abstract

Ninh Thuan province is assessed to be of the scarcest surface water of our country, which is mainly provided by the Cai Phan Rang River. Its total catchment area of approximately 2.488 km^2 accounts for 74,05% of the whole province. It has low topography, slopes and the average annual rainfall of about 800 ÷ 1000 mm/year [1, 3]. Its evaporation capability annually is about 1.650 ÷ 1.850 mm high [1, 3]. Ninh Thuan's poor vegetation makes most of its surface water in rainy seasons flow into the sea. This is the main reason for the scarcity of its surface water resources.

The point is how to manage and protect these water resources in both quantity and quality to ensure economic growth associated with protecting them. To solve this issue, it is necessary to be aware of water use needs, identify factors affecting water resources and assess current pollution levels based on existing Vietnamese standards or models. The paper proposes environmental protection measures to ensure water quality for Ninh Thuan's economic and social development in the future. The paper also focuses on evaluating water quality of the Cai Phan Rang River from 2007 to now.

10. BSc. Trinh Xuan Manh: *Study on drainage capacity serving construction of communications in Tra Khuc left bank - Son Tinh district Quang Ngai province.*

Abstract

Riparian traffic route along the Tra Khuc River's left bank covers the communes of Tinh Ha and Tinh Son in Son Tinh district. It is one of the special routes located on the left riverbank with a total length of 7,2 km. After being constructed, the route is bound to provide many significant benefits boosting social - economic development of the area. The paper concentrates on researching the depiction of hydrological and hydraulic models with a view to define the crest level of the road route as well as calculate drainage capacity in case of a designed flood frequency of 10%.

11. MSc. Tran Van Tinh: *Application of the HEC model for setting inundation mapping in the downstream area of Vu Gia - Thu Bon basin.*

Abstract

In recent years, water resource-related issues have always been hotly debated topics attracting many organizations in Vietnam and all over the world. Water is a vital and irreplaceable natural resource. Beside it, water also brings many natural disasters threatening human life. Flood is one of the most serious disasters, which have a tremendous impact on our country.

The paper presents methodology and results of inundation mapping in the downstream area of Vu Gia - Thu Bon using the data of a historic flood in 2009 with a designed flood frequency of 1%.

12. Dr. Le Quoc Hung; MSc. Vu Thi Phuong Thao; MSc. Le Thi Mai Van; MSc. Nguyen Ngoc Quang: *Building reservoir warer resource scenarios in combination between remote sensing*

technology and hydrological - hydraulic models and preliminary damage assessment in the case of dam break.

Abstract

The study focusses on practical demands for remote - sensing field to give an early warning of water resource impacts on the downstream of the dam. Besides, it also presents the process of combination between remote - sensing information processing technique and hydraulic-hydrological modeling system to build water resource scenarios directly served for monitoring and supporting disaster adaptation decisions as well as planning socio-economic development.

The research orientation seems to be quite promising. Furthermore, in permitted conditions, the authors plan to extend a deep and detailed research into a larger river basin in conjunction with assessing the impacts of socio - economic conditions in the case of destroyed dams.

13. BSc. Đinh Thị Hong Van; BSc. Nguyen Thanh Luan: Study on the circulation of Nha Trang bay using MIKE 21 model.

Abstract

Studying oceanic currents, especially coastal currents has drawn much attention of many oceanographers and administrators in coastal provinces including Nha Trang city because they have strong impact on environmental conditions and cultural - socio - tourism activities of such cities. The paper focusses on specific current distribution in Nha Trang Bay in some typical conditions using the hydrodynamic module of MIKE 21 flow model and it has achieved several positive results. Calculated results indicate that current field variation in Nha Trang Bay is influenced by the shape of the coastline, bathymetry, tide, etc… whereas seasonal circulation is mainly affected by monsoon and river discharge. The results also show that there exist some inshore whirlpools when the tide changes its phase in the two monsoon wind periods.

14. MSc. Pham Van Chung: *Characteristics of petrology - geochemistry and origins granitoids of mountain Nui Dieng assemblage area Tam Dao.*

Abstract

Granitoid of Nui Dieng complex in Tam Dao area covers two plutons of Nui Dieng and Nui Phao. Rocks belong to two - mica granites with a texture of porphyries. They are often from medium to big in size and light in color. In terms of geochemical features, the rocks belong to the calc - alkaline with high K series. In addition, they have high ASI values of $1,1 \div 1,6$ and are characterized by high initial $87Sr/86Sr$ ratios $(>0,708)$ bearing typical features of S-type granite. Zircon U-Pb isotopes determine the age of granites and at the average age of 248 Ma. Besides, geochemical features of rare trace isotopic elements also indicate that granitites are formed by partially re–melting of continental crust.

15. MSc. Nguyen Thi Anh Tuyet; Assoc. Prof. Dr. Nguyen Van Noi: *Development of organoclays from Thanh Hoa bentonite and their sorptive characteristic towards direct blue - 53 in pollution water.*

Abstract

The study shows that organoclays are synthesized by replacing benzylhexadecyl-dimethylamonium (BHDDMA) cation with Thanh Hoa bentonie. The structural features of betonies

and organoclays are studied by X-ray diffraction (XRD), scanning electron microscopy (SEM), chemical analysis, thermal analysis and FT-IR spectra. The intercalation of the BHDDMA cation increases the interlamellar distances from 15A for Na-betonies to 36A for organoclays. The paper also shows the absorption ability of DB - 53 (one of the phenol compounds) on modified betonies.

16. Dr. Pham Thi Thuy; Dr. Đang Tran Chien: *Synthesis study of GaP NANO crystals used for application in cleaning water technology.*

Abstract

The paper presents some results of synthetic study on GaP nano crystals used as a potential photocatalyst/photofunctional material for water cleaning/purifying technology. GaP nano crystals have been frabricated from an n-GaP substrate with (111) orientation by electrochemical etching in chemical mixture/mixture solution of HF (48%) and alcohol (98%). SEM image shows that the diameters of GaP crystals are about hundreds of nanometer. The GaP Raman scattering spectrum not only consists of Lo-phonon and TO-phonon peaks but also appears the one related to surface vibratory modes. This means that GaP nano crystals have been formed.