

1. Jana

The Visualization Issues of Worldwide Map Portals

Worldwide map portals have become an important platform for spatial data presentation. These portals attract millions of users every day, being among the most visited Web sites in the world. Therefore, they started to be a subject of study for cartographers carrying out research on usability issues.

This paper is based on previous usability studies that analysed Google Maps, MSN Maps & Directions, MapQuest and Multimap. Mentioned map portals have been evaluated from the following points of view: user interface, visualisation, searching capabilities and help perspectives.

Our contribution enhances primarily the visualisation aspects of the previously mentioned map portals, nowadays designated as Google Maps, MapQuest and Bing maps. Moreover, functional aspects and map tools have been also examined. Our main motivation was rapid development of web cartography in general and also improvements implemented on the worldwide map portal in last years.

The visualization aspects were tested in a distributed web based MUTEF environment (MULTivariate TEsting Programme), developed in cooperation of-with cartographers and psychologists on-from the Department of Geography at Masaryk University. MUTEF application enables utilization of various testing methods. We decided to involve-include a combination of quantitative and qualitative information for the evaluation of map portal visualization aspects-evaluation. The Hhypothesis for these test-sing wasere based on the preliminary analysis of the differences between the aforementioned map portals e.g. density of map content, used cartographic symbology or generalization method. The Rresults of the test-sing were subsequently statistically processed. Several usability tasks have been conducted to discover the most important up-to-date usability problems of users. So far, we have identified symbology, colours schemes, labelling and legibility issues as-being the crucial ones-concerns. These usability issues are later discussed later and compared with previous studies. This work may contribute to further improvement of worldwide map portals.

2. Petra

This study focused on serological evidence of West Nile (WNV) and Usutu (USUV) flavivirus infections in the common coot (*Fulica atra*) on fishponds in central Moravia, Czech Republic. Out of the 146 birds examined, 18 reacted in the plaque-reduction neutralization test (PRNT₉₀) for WNV antibodies. These WNV seropositive samples were then titrated in parallel for antibodies against tick-borne encephalitis virus (TBEV) and USUV to exclude cross-reactivity. Out of these 18 positive birds, two birds (11.1%, and 1.4% overall) had the highest titers for antibodies against WNV and nine birds (6.2%) were-tested positive for USUV, while in seven birds the infecting flavivirus could not be differentiated. Our results indicate that WNV and USUV co-occur in common coots that might serve as hosts of both viruses at-across fishpond habitats in the Czech Republic.

Komentář [SB1]: This is incoherent...a change of word from 'being' to 'making them' would rectify this

Komentář [SB2]: Avoid phrasal verbs in academic writing by replacing them with formal single verb equivalents: e.g.: **conducting**

Komentář [SB3]: Unclear; rephrase

Komentář [SB4]: Hedge a little...

Komentář [SB5]: This sentence would be best place at the end of the previous paragraph, continuing your explanation of what was examined/done in your study

Komentář [SB6]: Missing text...e.g.: to examine/explore/investigate the rapid...

Komentář [SB7]: The present tense is usually used when introducing your own work/research/study

Komentář [SB8]: Unclear...do you mean simultaneously?

3. Lenka

Securitization of Migration in Slovakia: Security Framing of Migration Process in State Service

The article analyses a phenomenon in the Slovak society that is the perception of foreigners to be a threat, whether potential or real. This threat, however, is not real; it is a social construct which is the result of the interaction between securitisation actors and audience. The actors of their securitisation are the representatives of governments and the policy-makers. The analysis of their conceptions is forms the core of this article. As the security discourse has assumed the an institutional dimension of in the articulation of migration policy, the focus is being oriented exactly on the employees of these institutions. Securitisation of migration brings numerous negative side-effects, such as the erosion of social cohesion in the society, focusing the attention primarily on the control and regulative measures or the inadequate interest devoted to the integration of foreigners into society. The aim of the article is to analyse the perception of the state service employees who come across the immigration and integration policies. Ethnographic approach focuses on their perception of migration as a potential or real threat. The first partial-of several aims was to find out whether the representatives of the state service in Slovakia who take part in the formation or the execution of the migration policies have the a tendencies to perceive the migration and migrants to be a threat. The second of the partial goals aim was to identify the state institutions that are a part of control and regulation mechanisms, in addition to and the state institutions created for the purpose of solving the questions of integration, that is, the incorporation of the foreigners into the receiving society – or so called core society. The article concludes that migrants are not yet perceived as a threat although they would be in case if the number of immigrants would were to rise rapidly; if isolated migrant communities would be formed; and if the illegal migration would expand. The article formulates some recommendations responding to negative aspects, malfunctioning and insufficient public policies highlighted by the respondents.

Key words: Securitisation, migration, integration, state service, Slovakia

4. Martina

The infections caused by extended-spectrum β -lactamase (ESBL) - producing organisms are associated with increased mortality. The real-time PCR method, which enables detection of ESBLs directly from patients' clinical material, was developed. This study was focused on bla_{CTX-M} and bla_{SHV} determination in endotracheal aspirates. Each sample was identified with standard microbiological procedures and simultaneously was analyzed for the presence of nucleic acids which encode CTX-M and SHV ESBL enzymes using real-time PCR. A total of 341 samples were investigated. In the set, 27 ESBL-positive samples were identified by phenotypic methods while 60 positive samples were identified by through the PCR method. Of the 60 PCR-positive samples, 58 were positive for the bla_{CTX-M} . In 2 samples the ESBL $bla_{SHV-ESBL}$ gene was detected. One phenotypically positive sample was PCR negative. The real-time PCR

Naformátováno: zvýrazněné

Komentář [SB9]: Use **This** the first time you introduce your work, and *then The* thereafter

Komentář [SB10]: The use of 'that' is unclear here: do you mean Slovaks often perceive foreigners to be a threat? If so, place commas either side of the phrase **that is**

Komentář [SB11]: Be consistent in your choice of American or British spelling

Komentář [SB12]: Wrong word

Komentář [SB13]: Of what...?

Komentář [SB14]: This is unclear

Komentář [SB15]: Avoid phrasal verbs in academic writing

Naformátováno: Písmo: Kurzíva

Komentář [SB16]: This seems a little incomplete: do you mean this was developed as a result of your study, or something else?

Komentář [SB17]: Use the present tense to introduce your work

assay does not require a cultivation step and therefore enables detection of ESBL in 6 hours. The rapid method is necessary for early and adequate antimicrobial treatment.

5. Sachin

“Argumentation Ethics and the Justification of Private Property”

The ongoing economic crisis is often perceived as a crisis of capitalism and the political philosophy of liberalism. In this contribution we will investigate the philosophical solidity of one the cornerstones of liberalism, namely the institution of private property. We will offer a constructive approach by trying to justify private property based on the normative characteristics that are present in any context of a sincere dialogue. In the first part we will single out the normative primordially of truth, and the fundamental equality between the participants, in a sincere dialogue. In the second part we will look at the aspects of rationality and normativity present in human action. Finally, we will investigate how the normative characteristics of the first part can be connected with the elements of human action discussed in the ~~second part~~ previous section.

Komentář [SB18]: Where? In a particular country/region, or global?

Komentář [SB19]: comma

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Naformátováno: zvýrazněné

Komentář [SB20]: avoid phrasal verbs

Naformátováno: zvýrazněné

Naformátováno: zvýrazněné

Komentář [SB21]: try to vary your grammatical constructs

6. Mariya

Whole genome sequencing of multidrug-resistant *Klebsiella pneumoniae* strains

BACKGROUND: Fast-growing modern Next-Generation Sequencing (NGS) technologies gradually supplant conventional sequencing methods in both basic and applied research. The main objective of this study was to investigate major forms of basic molecular characteristics, such as: sequence type, resistance genes and number of plasmids using whole genome sequencing (WGS). In our study we applied the whole genome shotgun sequencing approach to sequence 11 multidrug-resistant strains of

Klebsiella pneumoniae (~ 5,3 Mb).

Komentář [SB22]: the present tense is usually used here

Komentář [SB23]: comma

METHODS: Bacterial DNA was isolated from overnight culture of extended-spectrum beta-lactamase producing *Klebsiella pneumoniae* strains. DNA library was prepared with New England BioLabs and Kapa Biosystems kits. Sequencing was done with MiSeq Reagent Kit 300v2. Bacterial DNA sequencing and data generation was carried out on Illumina MiSeq sequencing platforms. Bioinformatic processing and the evaluation of data was largely done through interactive online tools. Basic rapid strain typing, such as detection of resistance genes and Multi-Locus Sequence Typing (MLST) identification, was done by using a web-based method provided by Center for Genomic Epidemiology, among additional tools we've used to analyze NGS data were CLC Genomics Workbench 6.0.4, MEGA 6, and other software.

Komentář [SB24]: this section is largely clear, however, it contains a repetitive style of writing in terms of the grammatical structure (i.e.: X was...)

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Komentář [SB25]: avoid phrasal verbs

Komentář [SB26]: never use contractions in academic writing

Komentář [SB27]: this seems somewhat vague...

RESULTS: Average read obtained as the result of high-throughput DNA sequencing was 250 nucleotide bases long and 99.97% accurate and reliable according to average PHRED score. We determined an appropriate sequence type (ST) by MLST, identified antibiotic resistance genes of 8 antimicrobial groups and a set of small plasmids. We have also discovered a new MLST type 1646, which was approved by specialists from Institut Pasteur and subsequently submitted to the Institut Pasteur MLST Database.

Komentář [SB28]: this does not read like a sentence, but more like note-form

Komentář [SB29]: check your verb tense: here, you use the present perfect, whereas in the previous sentence the past simple is used. Consistency helps guide the reader.

CONCLUSIONS: Due to the large amounts of data provided by whole genome sequencing, it is possible to identify ST and resistance genes, type plasmids and analyze many other genetically determined characteristics. Therefore, we can state that WGS is a powerful modern technology, which introduces a new comprehensive approach to solving both basic research and ordinary practical tasks.

Komentář [SB30]: comma

7. Pavla

There are several green methods available to synthesize iron-based nanoparticles using different bio-based reducing agents. Although their useful properties in the degradation of organic dyes, chlorinated organics, or arsenic have been described earlier, their characterization has been ambiguous, and therefore further research is needed in this area. Synthesis and characterization details on iron-based nanoparticles produced by green tea extracts are described in detail; characterization was carried out by transmission electron microscopy (TEM), X-ray powder diffraction (XRD), and UV-vis spectrometry followed by ecotoxicological assay. XRD and TEM analyses revealed that iron forms amorphous nanosized particles with their size depending on reaction times. Moreover, low-temperature Mössbauer spectroscopy confirmed progressive reduction of Fe³⁺ to Fe²⁺ during the reaction. Finally, the iron(II,III) nanoparticles prepared by green tea extract (GT-Fe nanoparticles) were found to have negative ecotoxicological impacts on important aquatic organisms, such as cyanobacterium (*Synechococcus nidulans*), alga (*Pseudokirchneriella subcapitata*), and even invertebrate organisms (*Daphnia magna*). The EC₅₀ values are 6.1 ± 0.5 (72 h), 7.4 ± 1.6 (72 h), and 21.9 ± 4.3 (24 h) mg of Fe per L, respectively.

Komentář [SB31]: avoid phrasal verbs

8. Martina M

Abstract

BACKGROUND: Gastrointestinal tract can be an important source of pathogenic yeasts. One of them is *Candida dubliniensis* which is often misidentified as *Candida albicans* due to their-its high phenotypic similarity.

AIM: The aim of this work was to find out the incidence of *C. dubliniensis* in human stool samples and molecular characterization of these isolates.

Komentář [SB32]: avoid phrasal verbs; e.g.: here you could use **identify**

METHODS: *C. dubliniensis* was identified by-using three phenotypic methods. The results were verified by a species-specific polymerase chain reaction. Important virulence factors (phospholipase and

haemolytic activity, production of secreted aspartyl proteinases and biofilm formation) were monitored in tested strains. Divergences of strains were evaluated due to the pulsed field gel electrophoresis.

RESULTS: Among 749 *C. albicans* isolates gained from human faeces samples, 15 were identified as *C. dubliniensis* (2.0 %). None of the *C. dubliniensis* isolates showed phospholipase activity and only four strains showed an ability to form strong adherent biofilm layer. Most of the *C. dubliniensis* isolates were able to produce proteinases (n = 10) and all of them showed haemolytic activity. Among 15 isolates of *C. dubliniensis* from stool samples and 2 isolates from respiratory tract, 14 different karyotypes were found.

CONCLUSIONS: Cultivation on Staib medium was the most reliable phenotypic method which was used. The low occurrence of the virulence factors in *C. dubliniensis* strains indicates limited pathogenicity of this yeast in contrast with *C. albicans*. Fourteen different karyotypes of *C. dubliniensis* were found. However, isolates were similar on a high level of similarity at 92 %.

Komentář [SB33]: is this meant to be a cause and effect, or something that indicates what it is done with/how...?

Naformátováno: zvýrazněné

Naformátováno: zvýrazněné

Naformátováno: zvýrazněné

Komentář [SB34]: try to vary the grammatical structure of your sentences a little

Naformátováno: zvýrazněné

9. Katerina

Excessive internet use and its correlation with negative experiences in 25 European countries

Katerina Skarupova, Kjartan Ólafsson

Introduction. The current debate on internet addiction is driven by the question of whether it constitutes a distinct mental disorder. Our analysis of excessive internet use in adolescents offers an evidence for the line of research that distinguishes between addiction to the internet in general and addiction to specific online applications (as online games, cybersex, etc.)

Method. We worked with the EU Kids Online II survey data representative for children aged 11 to 16 years in 25 European countries (N=18,709). EIU was measured using a five-items scale with one item for each of following criteria: salience, withdrawal, tolerance, conflict, and relapse. A set of regression models was used to assess the probabilities of various negative consequences for each EIU score.

Results. A surprisingly consistent pattern was identified across Europe when controlling for country differences with the score of 2.5 on EIU doubling the probability of misbehaviours, health and mental health problems, and negative online experiences.

Conclusion. Our results suggest that general internet addiction, as measured by EIU scale, occurs in children that who suffer from a much broader spectrum of both, online and offline, problems. Therefore, it might be better described as a symptom of behavioural problems rather than a separate psychological condition.

Komentář [SB35]: the possessive form of it does not have an apostrophe (it's is a contraction for it is)

Komentář [SB36]: evidence is uncountable

Komentář [SB37]: avoid run-on expressions in academic writing; instead, you could start with for instance, and then give up to three examples (or what is known as 'the tripling effect')

Komentář [SB38]: ?

10. Jana K

Utilization of bioelectrical impedance for monitoring body parameters of women in slimming program

The theoretical part of the thesis deals with basic findings from the field of human nutrition. It breaks down particular food components, its function and meaning. It also describes the manner and methods of overweight or obesity determination and the overall composition of human body. It concentrates primarily on determining composition of human body and physical parameters using bioelectrical impedance on devices InBody 230 a BodyStat QuadScan 4 000. The practical part of the thesis tracks measured psychical parameters from these two devices before and after STOB reduction course and observes, if any change took place. It compares the devices between-with each other. The obtained data are statistically evaluated in-using program Microsoft Office Excel 2007 and Statistica Cz, version 10.

Komentář [SB39]: Avoid phrasal verbs in academic writing; here, you could use addresses | highlights | identifies...

Komentář [SB40]: Check...

Komentář [SB41]: Should this be 'to observe' ...?

Komentář [SB42]: superfluous

11. Václav

Comic books employ a complex interplay of text and images that gives them the potential to effectively convey concepts and motivate student engagement. This makes comics an appealing option for educators trying to improve science literacy about pressing societal issues involving science and technology. Here, we report the results from the first systematic assessment of how a science comic book can affect student learning and attitudes about biology. We used pre- and postinstruction instruments to measure students' attitudes about biology, attitudes about comics, and content knowledge about evolution before and after using the science comic book Optical Allusions in their classes. On the preinstruction instrument, nonmajors reported the lowest scores on the content test and attitude surveys relative to the other groups. However, on the postinstruction instrument, nonmajors' content scores and attitudes showed a statistically significant improvement after using the comic book, particularly among those with lower content knowledge at the start of the semester. The improvement in attitudes about biology was correlated to-with attitudes about comics, suggesting that the comic may have played a role in engaging and shaping student attitudes in a positive way.

Komentář [SB43]: hyphenate?

Komentář [SB44]: Where possible, rephrase the sentence to avoid the use of the possessive apostrophe in academic writing

Komentář [SB45]: Again, hyphenate?

Naformátováno: zvýrazněné

Naformátováno: zvýrazněné

12. Pavlína

Inbreeding depression of sperm traits in the zebra finch *Taeniopygia guttata*

Inbreeding depression, the reduction of fitness due to mating within close relatives, is one of the most studied issues in biology. Inbreeding usually rebounds in fitness-related traits, such as body mass, testis weight and sperm production in various animal species. The quality of sperms is one of the most important traits that is directly linked to fitness and the final fertilization success of males. Therefore, it is surprising, that this topic is not well studied in birds and that there is no experimental evidence showing how inbreeding depression really affects ejaculate quality and sperm phenotype. Here we perform a clear experimental evidence of negative effect of inbreeding on sperm traits in passerines, choosing zebra finches as a model species. In this study, we used a total of 105 zebra finch males, of which there were 38 inbreds (inbreeding coefficient $F=0,25$) and 67 outbreds ($F=0$). We found a significant decrease in the quality of ejaculates in inbred birds compared to outbred birds. Inbreeding depression resulted in both lower sperm motility and a higher percentage of abnormalities in ejaculates of inbred males.

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Naformátováno: zvýrazněné

Naformátováno: zvýrazněné

Komentář [SB46]: Is this being used as an intensifier here? If so, significantly would be more academic

Komentář [SB47]: Odd expression

Naformátováno: zvýrazněné

Morphologically normal spermatozoa of inbreds had shorter heads than outbreds but they did not differ in ~~a terms of the~~ total length of sperm cell, midpiece and tail lengths). Based on this study, we can ~~preas~~sume that inbreeding depression ~~has~~ tremendous negative effect on sperm quality in passerine birds.

Komentář [SB48]: Always? If not, hedge

Key words: Inbreeding depression, passerine birds, zebra finches, ejaculate quality, sperm morphology, sperm motility, sperm abnormalities.

13. Michal

Processing pipeline in jMRUI for a good clinical practice

Purpose:

To ensure reproducibility and automation ~~of data processing in data processing~~ software it is desirable to ~~clearly~~ document ~~well~~ all ~~the~~ processing steps. This is especially important in ~~the~~ clinical practice and in ~~the~~ medical research where it can be ~~forced by to provide~~ granting organizations and/or governments ~~to provide the~~ processing history that cannot be modified by the user to avoid data fabrication. The documented history can be used for automation of processing in ~~the~~ form of macros, for reproducibility in ~~the~~ form of a processing protocol stored together with processed data, or ~~it~~ can serve as a database of all ~~the~~ processing steps ever ~~used and thus be used~~ as a scientist's note or as a bug tracking tool for software developers.

Komentář [SB49]: Repetitious; consider an alternative way of phrasing this...

Komentář [SB50]: Sounds a little too strong; perhaps you could use **mandatory**

Komentář [SB51]: Avoid repetition in quick succession

Methods:

~~In order to~~ record the whole processing pipeline from time of data loading to their quantitation in jMRUI1, a robust database recording of every action performed in jMRUI was developed in Java. The recording process is based on the relational H2 database management system² supporting the subset of the Structured Query Language³ (SQL) standard. In current implementation a single file database is used. The structure of the implemented database makes ~~it~~ possible to change to a centralised database located on an external server. Each processed data file is registered by its name and hash code. Since the hash code of the file depends only on its content, the same file ~~in different locations~~ will be recognised ~~in different locations~~. By using the database it is possible to track the history of each file, including the files that were derived from ~~those~~ already processed ~~files~~ (inheritance of processing history). Additionally, the results of quantitation and other

intermediate files are stored in the database directory with a unique identifier. The hash code approach also helps to save ~~the~~ storage space, as the intermediate files are stored only once. ~~Beside~~ Aside from the storage of the processing history in the database, the history is also saved along with the processed data in a text log file.

