



### SESIUNEA DE COMUNICĂRI ȘTIINȚIFICE A STUDENȚILOR

# INNOVATION FOR NEXTGEN EU / STUDENT'S CONFERENCE

ALBA IULIA, 18-19 MAI 2022

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### Travel blogs and their influence on the decision of the potential consumer of travel services

Draguțan Marcela<sup>1</sup>

**Abstract:** In the scientific paper I will address the topic of travel blogs and their influence on the potential consumer of travel services, reflecting on the theory of blogs in general (definitions, classification, characteristics). Then I will approach travel blogs from a theoretical point of view (definitions, types, steps, tips for attractive content); addressing the specific behavior of the tourist when making the decision to purchase tourist services. I will present the travel blogs that are listed as the best for 2022, as well as the history of the appearance of the first travel blog. Then, with a practical example, I will demonstrate the influence of blogs on the potential of tourists and how the perspective of buying a tourist service changes after reading more information about a certain place in the visiting itinerary.

<sup>&</sup>lt;sup>1</sup> Moldova State University , Republic of Moldova

### A Brief Account on Risks in International Trade Transactions

Boris Iacovlev<sup>2</sup>

**Abstract:** Risk can be defined as a future event, uncertain but possible. Risk, in general, marks uncertainty, causes damage that can be physical (destruction of property) or financial. Businesses involved in international trade have to deal not just locally with risks but also with other business development risks such as ethics, transportation, intellectual property, credit, currency. These risks can obstruct the smooth running of the business, and hence, appropriate measures need to be taken to limit their effects. In this paper, I will present six categories of risks commonly faced by businesses involved in international trade and effective ways to manage them: Credit Risk; Intellectual Property Risk; Foreign Exchange Risk; Ethics Risks; Shipping Risks; Political Risks. International trade business is on the rise at global level. When doing business in the field of international trade, a stable and competitive business environment is vital to operate efficiently and attract inward investments. Nevertheless, conducting business in an open economy is risky, hence companies should develop policies to manage such risks and ensure the economic stability of the business. Managing international trade risks means to identify them, assess their impact on the business and the probability to arise. It also means to priorities risks, develop measures to overcome them, minimize their negative impact and prevent them in the future.

<sup>&</sup>lt;sup>2</sup> "1 Decembrie 1918" University of Alba Iulia

### The Impact Of Maritime Transport On Tourism

Macari Cristina<sup>3</sup>

**Abstract:** Maritime transport is one of the ancient way of transport in the world, that was practiced by civilizations to transports goods and after years to practise the tourism. Maritime transport was globalizated and massive practised in the tourism market in the 60's. But in the XV-XVI century, was the one who influenced the Period of Great Geographical Discoveries, by being used by the Europeaneas to travel. Since that, tourism transport has become a defining element in tourism circulation. The Modernisation and the globalisation contribute to diversify ways of transport, especially maritime transport and use it not only as a way to cross from point A to point B, but to become a accomodations and selling holiday maritime packages. From definition, tourist means to "move" and the only one way to "move" is by using tourism transport. Maritime Transport has appeared as luxury transport only for rich people, nowadays this transport has been transformed and become more accessible and practising different types of boats. My purpose is to show the impact of maritime transport on the economy and show what are the advantages and disadvantages of this type of "holiday".

<sup>&</sup>lt;sup>3</sup> "1 Decembrie 1918" University of Alba Iulia

### Promotion Strategies Of Apple In A Foreign Market: China

Macari Cristina<sup>4</sup> Levcenco Valeria

**Abstract:** Apple represents one of the biggest and well known companies in the technological industry, moreover it has become the most valuable company in the world. This result does not appear the other night, it is a result of years of work and best market strategies to create loyalty towards their clients and put their attention not only on one state, but making sales to the rest of the world. That is how Apple INC becomes a leader on technological markets, by putting attention on emotions and clients' experiences, by being "different". Even if they have such a strong Personal Branding and strong Economical Indicators, one of Apple's threats is the Chinese market that seems to be a power in the technology world, launching products at a cheaper price with high level features. However, Apple INC seems to not be afraid of the Chinese competitor market and try to penetrate their products into this market by applying some of the most powerful strategies to create loyalty towards the local market and win the Chinese sympathy.

<sup>&</sup>lt;sup>4</sup> "1 Decembrie 1918" University of Alba Iulia

### Crisis management strategies in the hospitality industry

Agagiu Mihaela<sup>5</sup>

**Abstract:** The repercussions highlighted in the pandemic context and propagated on the fragile balance of the hospitality industry imply the need to implement specific concepts of crisis management, by managing with maximum efficiency the disruptive events from the perspective of this industry.

Identified as an industry that has been severely unbalanced by the unpredictability of the pandemic context and government regulations proposed to limit the spread of coronavirus, most have highlighted the need to shape and implement crisis management strategies, cpable to mitigate organizational imbalances. The irreparable financial losses recorded in the tourism services and in the events industry present a psychological challenge that is difficult to master and overcome in the context of such complex crises, of a political, social and economic nature. The current turbulent environment has required a rethinking of the business strategies of the identified companies in the hospitality industry, from the perspective of identifying new ways to ensure the sustainability of their business.

From the perspective of the author's practical experience, this paper addresses both a series of concrete elements that reflect the importance of personnel management for the efficient operationalization of crisis management, as well as examples of good practices that present concrete solutions for managing situations encountered in organizing events. - lack of qualified staff, maintaining economic profitability, managing viable partnerships and identifying new limited business opportunities due to the pandemic.

<sup>&</sup>lt;sup>5</sup> Spiru Haret University

### Substantiation of customer relationship management in the context of the pandemic within Costa Rica's hospitality industry

Mandalac Antonia<sup>6</sup>

**Abstract:** Presenting itself as one of the most popular tourist destinations in Central America, Costa Rica delights the visual filter of millions of visitors through the rich vegetation and fauna, the organized nature of ecotourism and the boundless beaches that conquer even the most demanding sun lovers. One of the determining factors of the success of the tourist destination mentioned above is represented by the concept of CRM -Customer Relationship Management found mainly in all tourist structures with accommodation facilities. The special attention for the superior satisfaction of the needs of the guests makes Costa Rica one of the most welcoming tourist destinations. The implementation of the CRM concept is exemplified by the presentation of the practical ways in which the Tabacon Thermal Resort & Spa hotel, one of the most appreciated tourist resorts in the country has built a long-term successful relationship with its customers based on the superlative attitude of human resources and attention given to important details for loyal customers.

The article also focuses on the importance of using social media communication to develop CRM strategies, a component that is gaining new value in the context of current crises, that are generating uncertainty and anxiety for consumers of tourism services.

<sup>&</sup>lt;sup>6</sup> Spiru Haret University

## The importance of digitalization and the implications of using industry 4.0- specific technologies in modern tourism

Danalache (Teodor) Elena Daniela<sup>7</sup> Teodor Natalia

**Abstract:** The constant evolution of technology has managed to facilitate people's access to information. At present, the possibilities to find information are at a "click" distance, and both consumers and service providers are trying or even succeeding in adapting to the new conditions. In this context, the purpose of this paper is to observe the impact that Industry 4.0 has on tourism today. In the same way, the paper will consider the analysis of the digitization process and how customers share their consumer experience on tourism services. The impact that technology has nowadays is one that, at the moment, can distinguish between competing companies, creating real competitive advantages.

The ability of companies to know customer requirements is greatly improved, with aggregate customer data becoming more accessible. However, consumer behavior is sometimes difficult to predict and as a result, companies' ability to adapt to these changes is also limited. The latest trends in tourism worldwide have been characterized by changes in substance, both in terms of consumption and the supply chain of tourism companies. The incorporation of industry-specific 4.0 technologies into this chain aims to achieve direct benefits for both tourism providers and consumers.

<sup>&</sup>lt;sup>7</sup> Spiru Haret University

### Revolut – the leading Fintech app

Ciobota Virgil<sup>8</sup>

Abstract: Consumer behaviour has always been a hot marketing topic, because knowing how and why consumers act in a certain way, will help companies improve their marketing strategies and be more successful on the market. A challenge faced by all marketers today is how to influence the purchase behaviour of consumers in favour of their products or services. The type of research used for conducting this study is quantitative research and the research instrument used is an online survey that will be completed by people who had used and who had not used before Revolut. The respondents were selected from friends, colleagues and through social media groups on WhatsApp and Facebook, through the snowball sampling method. Revolut has an impact on the banking industry, setting new challenges and hights, mainly because people are more and more pretentious and want better services and products. Revolut came with their innovative platform offering better banking services than a traditional bank, like faster transfers, no fees and the possibility to trade. Nonetheless, it is still questionable why people prefer now to choose mainly Revolut, or other fintech platforms, instead of traditional banking and what would be the impact on the banking industry in the future.

<sup>&</sup>lt;sup>8</sup> "1 Decembrie 1918" University of Alba Iulia

### Wave Survival: Efficient Response To Global Events And Trends In The Hospitality Industry - The Club Med Case

Hațegan Dana-Iuliana<sup>9</sup>

Abstract: The tourism industry around the world has gone through a series of events caused by the outbreak of the pandemic caused by the SARS-CoV 2 virus, with Asia and Europe having the most devastating effects. As a result of closed borders and travel restrictions imposed by governments and travel advice from the World Health Organization, travel companies have had to rethink and adapt their strategies to deal with uncertainties. This study looks at the different strategies implemented by Club Med in this crisis, in order to better understand how a global company with the largest turnover from highly affected regions such as Europe and Asia, has adapted to the economic crisis and which has affected the hospitality sector in recent years. The research tracks the parent company's annual reports on Club Med's turnover and their annual CSR reports, as well as previous research on the impact of the pandemic and post-pandemic scenarios. The conclusions showed that regardless of the crisis situation, the company managed to maintain its future expansion objectives and responded in a favorable way to the latest emerging trends in tourism.

Key words: hospitality industry, Club Med, strategic management

<sup>&</sup>lt;sup>9</sup> "1 Decembrie 1918" University of Alba Iulia

#### Electronic Commerce. Evolution. Trends.

Neagu Maria<sup>10</sup> Barbulat Alexandrina

**Abstract:** Nowadays, some time after the so-called Internet revolution, ecommerce remains a relatively new, evolving and ever-changing area of business management and information technology.

E-Commerce is not just the internet, websites or dot com companies. Electronic commerce has an impact on many business areas and disciplines of business management studies. For example: Marketing; Informatics; Finance & Accounting; Economy; Production and operations management; Human resources management; Law and business ethics.

Popular e-commerce models used by e-commerce companies: Business to Business (B2B) e-commerce; Business to Consumers (B2C) e-commerce; Consumer to Consumer (C2C) e-commerce; Consumer to Business (C2B) e-Commerce; Business to Employee (B2E) e-commerce.

E-commerce means doing business electronically.

One of the problems facing e-commerce entrepreneurs is the lack of predictability of sales. Even without a pandemic, e-commerce will continue to grow in 2022, but not as much as in 2020 and 2021. Phone purchases will increase in 2022. Social Commerce, direct sales from social media platforms, will also increase in 2022. The most used remain to be: TikTok, Instagram and of course Facebook. Shoppers are already accustomed to find all the things they need in one place, so the transition from online stores to Market places or virtual malls can be expected.

<sup>&</sup>lt;sup>10</sup> "1 Decembrie 1918" University of Alba Iulia

### Community start-ups – Youth Capitals Program as a reliable and reliable engine

Andreea- Anamaria Cordon<sup>11</sup>

**Abstract:** This research paper aims to analyse how the Youth Capitals program supports the Community. The research starts from the premise that such a project, which takes place over a year, manages to develop the youth sector and give it a new start in the Community in which it is carried out. Based on information from 2015 to today, the author contrasts local development and program sustainability. Thus, the present paper wishes to emphasise the need to run these programs and the benefits brought. Keywords: sustainable development, sustainable community development, Youth Capitals program, young people expectations

<sup>&</sup>lt;sup>11</sup> "1 Decembrie 1918" University of Alba Iulia

### Label - source of information on foodstuffs

Cealnîc Maria<sup>12</sup>

**Abstract:** Correct and complete information in relation to consumer goods is the most effective way to protect the consumer against abusive practices by producers and traders, and the label is the safest means of communication between industry, trade and consumption, this being considered the component informational-aesthetics of the goods that cannot be missing from the product, at the same time being the result of the increase of the need for the most accurate information regarding the purchased products, especially the food goods. So the label has the task of reducing uncertainty and gaining consumer confidence in the manufacturing companies and their products, respectively.

According to the Methodological Norms on Food Labeling (from GD 784 of 1996 amended by GD 953 of 1999) "the purpose of food labeling is to provide consumers with all the necessary information, verifiable and easy to compare, so that they make the right choice, choosing the product that best suits their needs, their demands, their financial ability, or their current interest. "

Not analyzing and ignoring it can lead to significant consequences for the health of those who consume it.

<sup>&</sup>lt;sup>12</sup> "1 Decembrie 1918" University of Alba Iulia

### From bean to consumer: Who are the main actors of coffee international trade?

Hațegan Dana-Iuliana<sup>13</sup> Pasca Cristina Ioana

**Abstract:** Coffee is one of the most bought beverages in the world, with billions of sales done daily on trade and off trade. Facing recent events, coffee trade was affected by travel restrictions and, in consequence, also farmers who produce coffee. Focused on the export and import of coffee beans and how coffee trade is regulated, the paper aims to analyze how the development of hybrid plants, sustainability policies and consumers behaviors have impacted the overall coffee market. key words: international trade, coffee, sustainability

<sup>&</sup>lt;sup>13</sup> "1 Decembrie 1918" University of Alba Iulia

### Insights on the evaluation of staff performance

Pasca Cristina Ioana<sup>14</sup> Hațegan Dana

**Abstract:** The primary role of human resources on the scale of the whole society is also found at the level of the organization. Evaluation is a vital component in the recruitment, selection and employment process, where it is used to validate staff selection procedures. Decisions on transfer, dismissal, retirement are based on the results of the evaluation, and in the administration of rewards the evaluation of performance forms the basis for the payment systems of premiums or merit salaries. Performance appraisal consists of measuring the degree to which an organization's employees perform their duties. Performance appraisal involves practical considerations as to how it is to be performed, as well as philosophical considerations as to the reasons or reasons why it should be performed.

<sup>&</sup>lt;sup>14</sup> "1 Decembrie 1918" University of Alba Iulia

### Job Satisfaction Of The Teaching Staff In Higher Education Institutions As A Factor Which Affects The Teaching Staff Performance With Students

Nemanja Veselinovic<sup>15</sup>

Abstract: Nowadays job satisfaction of the teaching staff represents one of key issues in a teaching process, the issue which has influence on a teaching staff performance with students to a great extent. As the positive state of mind and the positive energy make people feel better, they become more engaged, work harder and achieve remarkable results. Content teaching staff strive to motivate their students to engage in active learning and this results in an enhanced student performance. Unlike discontent teaching staff, such employees carefully plan out their classes, build team dynamics, use modern teaching methods and focus on the process of learning. The subject of the paper is to examine whether job satisfaction affects differences in the teaching staff performance in higher education institutions and to identify dimensions of job satisaction which are the most important to academics. The aim of the paper is to propose measures to the teaching staff management, whose implementation may contribute to an increase of job satisfaction among employees in the higher education institutions. The intial hypothesis of the paper is that academics, who are more satisfied with their jobs, put more efforts into upgrading their teaching process and perform better in their work with students. Statistical methods (correlation and regression analysis) will be used in order to check this assumption. The analysis will be based on data obtained by primary research at state universities in the Republic of Serbia. Key words: job satisfaction, teaching stuff, performance, higher education, management.

<sup>&</sup>lt;sup>15</sup> University of Nis

### Aspects Regarding the Sustainable Development in the Apuseni Natural Park

Pasca Cristina Ioana<sup>16</sup>

Abstract: Generally, the high degree of urbanization along with demographic changes have a major impact on sustainability, especially in terms of use of natural resources and ecosystems. Sustainability refers to how we should live in harmony with the environment around us, protecting it from irreparable damage and destruction, while sustainable development is, in its fundamental approach, a balance between the contemporary lifestyle and the continuation of economic growth, given the protection of the environment and the necessity of finding of alternative resources; it is a type of development which takes place without depleting the available resources and without destroying the environment, and thus without compromising the possibilities of meeting the needs of future generations. The aim of this paper is to analyze the impact of certain factors such as demography and natural resources on the economic and social development in general and, in particular, on sustainable development. As a case study, we shall analyze and investigate the Apuseni Natural Park, more precisely by studying the relationship between demography environment - resources - development - climate change.

<sup>&</sup>lt;sup>16</sup> "1 Decembrie 1918" University of Alba Iulia

#### Adevărata valoare a articolelor vestimentare

Alexia Varlan<sup>17</sup> Linda Vadan

**Abstract:** Articolele vestimentare au o anumită influență asupra vieții și nivelului de trai al omului. Ele parcurg un traseu din fabrică până la expunerea lor în magazine și la achiziționarea lor de către clienți, dar puțini oameni cunosc ce se întâmplă cu articolele care nu sunt achiziționate și costurile acestora. Fabricarea vestimentației prezintă un efect negativ asupra mediului înconjurător. Se prezintă un model de "cost per wear " pentru a optimiza costurile achiziților de modă. Prin urmare, moda este un domeniu poluant, dar și costisitor.

<sup>&</sup>lt;sup>17</sup> LICEUL TEORETIC MARIN PREDA - ODORHEIU SECUIESC

### Pragul de rentabilitate – în timpuri inflaționiste

Tudor Ioan Ursu<sup>18</sup>

**Abstract:** Pragul de rentabilitate este baza analizei financiare ale firmelor dar, pragul de rentabilitate treptată nu este de sine înțeles. În viața cotidiană și economicî avem o inflație galopantă și vom avea o recesiune. Acest caz/fapt, va afecta rezultatele economice ale societăților economice și nu numai. Pragul de rentabilitate treptat înseamnă urmărirea costurilor fixe cănd acestea cresc în mod continuu și controlarea acestora de către utilizatori-agenți economici. Noutatea lucrării este atragerea atenției economiștilor asupra pragului de rentabilitate influențat de inflație. Negăsind în literatura de specialitate termenul corect, noi l-am numit pragul de rentabilitate treptată.

<sup>&</sup>lt;sup>18</sup> LICEUL TEORETIC MARIN PREDA - ODORHEIU SECUIESC

### Firma de exercitiu D ALES SRL Plan de afaceri

Beale Alexandru<sup>19</sup> Tudorache Dragos Vasile

**Abstract:** Firma de exercitiu este o metoda didactica interactiva care dezvolta abilitatile antreprenoriale ale elevilor. Metoda firmelor de exercitiu este o metoda activ participativa centreata pe elev combinand elementele psihologice cu cele motrice, sociale si de comunicare.

<sup>&</sup>lt;sup>19</sup> Colegiul Economic Dionisie Pop Martian Alba Iulia

### Firma de exercitiu FE FLORY GROUP SRL Plan de Dezvoltare

Duriga Silvia<sup>20</sup>

**Abstract:** Firma de exercitiu este axata pe serviciile de turism, sectorul serviciilor este un sector generator de plus valoare, prin aplicarea lectiior de simulare a firmelor se antreneaza memoria, abilitatiile de comunicare, munca in echipa.

<sup>&</sup>lt;sup>20</sup> Colegiul Economic Dionisie Pop Martian Alba Iulia

### Catalog - Excellent Resource For Promoting Services At F.E. Aurul Apusenilor S.R.L.

Godici Andrei<sup>21</sup> Zbutea Georgiana

**Abstract:** The promotion of a boarding house is an important stage in the development of the business in the field of tourist accommodation services, due to the large number of boarding houses and the competition created. The catalog serves to promote the F.E. AURUL APUSENILOR S.R.L. , as well as to show and offer alternatives that can solve or satisfy the needs of consumers. It is one of the most effective sales tools on the market, occupying a prominent place in the company's marketing strategy.

<sup>&</sup>lt;sup>21</sup> Colegiul Economic Dionisie Pop Martian Alba Iulia

### Efficient Materials To Promote F.E. White Lady S.R.L.

Sincu Luiza<sup>22</sup> Salca Daria

**Abstract:** An immaculate image in front of customers, which reflects the potential of the entity, but also the services offered by it, can be the key to success for new entrepreneurs.

Making posters, leaflets, banners, business cards, attractive color flyers, with captivating messages and conclusive information, as well as printing and distributing them outlines an efficiency of this F.E. WHITE LADY S.R.L. market, and the potential but.

<sup>&</sup>lt;sup>22</sup> Colegiul Economic Dionisie Pop Martian Alba Iulia

### Computer systems for the power management of electric car charging stations

Harbea Alin Mihai<sup>23</sup> Neaga Eugen Dumitru

**Abstract:** This article describes the power management in a charging station of electrical cars. The software developed together with the hardware structure allows one to manage the installed power available in that location. We can install from one to four EV charging stations with 22kW three-phase AC power. The system will constantly monitor the charging state of the cars in the stands and will distribute the total available power so that all the cars receive maximum available energy.

For an easier understanding of the proposed system we will make a study case of two cars in one stand, each with 22kW internal source where both will receive maximum power of 11kW.

<sup>&</sup>lt;sup>23</sup> "1 Decembrie 1918" University of Alba Iulia

### Arduino ball balancer with gyroscope

Neagu Gheorghe<sup>24</sup>

**Abstract:** The ball balancer with Arduino and gyroscope will use the signals received from the gyroscope to be able to control the steady-state of the ball on a small platform (Base 2). The project includes an Arduino UNO board, a gyroscope, and 2 or even 4 servo motors. Its components will be designed in Fusion 360 and then printed on a 3d printer. The Arduino board and the servo motors will be fixed on the first base of the rocker and the gyroscope will be fixed to base 2 (the mobile platform on which the ball will rotate) and with the help of the transforming of the rotating servo motors below, it will be possible first of all to straighten the mobile platform and possibly to balance the ball on the platform. It will be necessary to program the Arduino board to make this possible. In this sense, a functional program will be made.

<sup>&</sup>lt;sup>24</sup> "1 Decembrie 1918" University of Alba Iulia

### ADAS technology on a small scale vehicle

Petruța Vlăduț<sup>25</sup>

**Abstract:** This document describes an application concerning certain basic ADAS functions on a low-scale vehicle. Advance driving assistance systems (ADAS) is a well known feature in today's cars safety systems specifications. The algorithms behind the engineered vehicle presented drive it on a single lane road based on the data provided by a camera. These data help the car to keep the track and follow traffic signs during its autonomous driving.

In order to obtain the behavior described above, there was implemented some deep learning and image processing algorithms based on the image acquired by the camera embedded in the designed mobile system. The logic that guides the vehicle is integrated in a development board based on Python, language used for developing the algorithms too.

The system allows remote connection in the OS interface for developing and debugging the algorithms. There can be saw the output of camera, and the confirmation of the functions implemented.

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#### Creation and implementation of electrical stringed

Dan Mihail<sup>26</sup> Serdean Bogdan Traian Moldovan Denis Gabriel

**Abstract:** An electric guitar is a guitar that produces sound by vibrating strings over a pickup that converts the vibrations into electrical signals. Those signals are fed into an amplifier, which projects the musical performance at a wide range of volumes. Most pickups function using electromagnetic induction, although non-magnetic pickups exist on a small number of electric guitars.

The earliest electric powered guitars had been made via way of means of the National Guitar Corporation, a Los Angeles organization well-known for its resonator acoustic guitar. Starting in 1931, designers like George Beauchamp, Paul Barth, and Henry Watson created fashions like the "frying pan" beneathneath the National brand. By the subsequent year, Beauchamp and Barth had teamed with Adolph Rickenbacker to shape the Ro-Pat-In Corporation (Electro-Patent-Instrument Company)—later named Rickenbacker Electro Stringed Instrument Company.

Electric guitars come in many forms, but they broadly fit into one of two categories.

The first type of electric guitar is known as an archtop guitar.

The other (and most popular) type of electric guitar is known as a solid body guitar.

The students project currently have electrical diagram in the program NI Multisim and on paper the block diagram. In the near future the guitar will be built physical and the semnal source will be changed with a microchip to be easier to be utilized and controlled by people.

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## Virtual Control Of A 3d Robotic Arm Using Automatic Command And Control Systems

Budin Adela- Ioana<sup>27</sup>

**Abstract:** This paper presents the control of a virtual 3D robotic arm using automatic command and control software. The proposed design for the robotic arm has four degrees of freedom and a gripper. For controlling the movement on the four axis, in the robot coordinate system, a virtual control button is used for each axis. The robotic arm was designed using a computer-aided design (CAD) software together with a computer-aided engineering (CAE) module. For the automatic command and control a graphical programming enviroment was used. When implementing the proposed application, two software interfaces were interconnected. The graphical interface of Labview allows the development of control applications using icons while the SolidWorks interface allows the 3D modelling of objects. The connection between these interfaces is made by the SoftMotion module from National Instruments. This application is very useful in industry because it helps to understand the concept behind the robotic movement without having it physically.

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### Power consumption assessment of a Windows 10 Computer

Mărginean Dan Cristian<sup>28</sup>

Abstract: Power consumption assessment of a Windows 10 Computer

The motivation for choosing this topic was the idea that, in the last years the world has encountered an unprecedented rise in PC's (Personal Computer) use because of the Covid-19 pandemic and all our daily activities have moved online.

The paper's main goal is how to monitor how much power each component utilities and the PC's power draw over all when realizing different task given to it.

The monitoring is done with the software tool Hardware Information 64 (HWINFO64) which allows the user to very precisely measure all of the working parameters of a PC, utilizing the internal sensors of each component.

The steps taken in the process are:

- 1 Verify that the PC is running Windows 10
- 2 Gather general information about the PC from Windows 10

3 - Open the PC and confirm the information about the components is accurate and read the power supply rating

4 - Install HWINFO64

5 - Compare the data obtained with manufacturer data sheet

6 - Evaluate the numbers obtained and add the power supply conversion deficit (usually around 10%)

7 - Take measures to decrease the consumption if needed

Some unique solutions to the problems pointed above will be presented along the method of work in the final paper.

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## Behavior Investigation of the Oscillator Circuit with 555 Timer

Vugar Imamov<sup>29</sup>

**Abstract:** Behavior Investigation of the Oscillator Circuit with 555 Timer In this article NE555P Timer was used for generating rectangular signal. The main point of this design is to investigate the circuit behavior on the analytical, simulative and experimental way.

In the proposed work the measured and simulation waveforms will be compared especially regarding to the rising and falling signal. The paper describes the input and output signals from the 12 V powered host circuit[1][2].

The form of the output signal including its duty-cycles can be controlled manually by on-board potentiometer or by simulation software. This circuit design by development can be used as a trigger source for BJT Pulse Generator with high frequency Pulse Train. [3]

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#### Driver's decision assistance system

Rusan Alexandra- Emilia<sup>30</sup>

**Abstract:** This paper present a way to build a practical application, using a microcontroller AT89S52. I programmed the microcontroller using "Keil" program with the help of embedded C programming language, being a program that includes 3 main tools: assembler, compiler and linker. I also used an electronic liquid crystal LCD display to present information in visual form, in this case the distance and angle at which an obstacle was detected. I have developed an application for driver's decision assistance, using in addition to the display and microcontroller, an ultrasonic sensor HC-SR04 and a buzzer. These components are connected on a pcb.

The entire system has the role of ensuring the safety of the driver, by warning about the distance of the obstacles.

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#### "New trends in augmented reality.

#### Features of Microsoft Azure Percept ".

Marioane Emanuel<sup>31</sup>

**Abstract:** "New trends in augmented reality. Features of Microsoft Azure Percept ".

The motivation for choosing this topic was the idea that, on the one hand the humanity is moving towards the digitization and classification of information and on the other hand the visual information is much more concentrated than other existing information.

The paper main goal is to create an advanced application resident on the Azure Percept development kit, able to monitor moving objects.

I started from the idea of building an AI model, which I can use to be able to recognize both my person and my own car in the parking lot.

Azure Percept Dev-Kit was built on the idea of edge computing by building a device with IoT Edge unit in its own operating system, which connected host device to microphones, a camera and an AI processor.

Connectivity comes via Ethernet, Wi-Fi or Bluetooth. It uses its own Microsoft CBL-Mariner Linux distribution, with Azure management and upgrade services.

In order to carry out the chosen issues, we interacted with the following parts:

- Hardware: Pc Host, Microsoft Azure Percept DevKit.
- Software : Microsoft Azure Portal, IoT Hub, IoT Edge

The implemented steps are:

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- 1-Create a personal account in the azure portal;
- 2-Create IoT Hub;
- 3-Account subscription creation with the role of owner;
- 4-Activity in the azure portal, with the devkit finished;
- 5-Create remote connection SSH key for kit;
- 6-Running tutorials from Microsoft azure portal;
- 7-Running two relevant applications :
- detecting people
- car detection.

Some unique and relevant primary experiments will be presented in the paper.

### Virtual Measuring Instrument for Environmental Parameters using LabVIEW

Bec Liviu-Mihai<sup>32</sup>

Abstract: Virtual Measuring Instrument for Environmental Parameters using LabVIEW

The paper's main goal is to design and test a ready to use virtual instrument for measuring air temperature and humidity. Initially the project was tested using the Arduino IDE programming environment, the measured data was displayed in the serial console of the IDE software. The virtual instrument (VI) is designed as hardware and software from an Arduino development board with an ATmega328 microprocessor connected to dedicated sensors for measuring environmental parameters and the LabVIEW virtual software. The temperature and humidity information will be measured using the microprocessor and displayed in the virtual computer user interface. The software application made in LabVIEW is saved in an executable format, which allows anyone to use the designed monitoring tool. The designed virtual instrument can replicate any real monitoring device by offering specific advantages.

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#### Earth grounding execution and measurement

Andrei Barna<sup>33</sup>

**Abstract:** The motivation form writing this paper is the rising number of accidents in relation with improper earth groundings or their complete absence from Romanian homes.

This paper's main goal is to instruct the reader how a proper earth grounding is designed, executed and verified.

The materials need are all zinc plate steel posts, steel band, nuts and bolts, insulation and coper wire.

The tools need are: digging equipment, insulated electrical tools, an mega ohmmeter with the proper inspection done up to date.

And the most important off all requirements is that the person making the measurements is a certified electrician that can sign the papers of conformity of the earth grounding.

The steps taken in the making of the earth grounding:

1 Inspect the electrical installation where the earth grounding needs to tap in the electrical panel

2 Survey the area to see the usable area where the earth grounding can be buried in

3 Dig the trenches and bury the post in and clap the zinc plated steel band to the post with nuts and bolts

4 Take an preliminary measuring without the insulation on and if it's parameters insulated and test it again

5 After in is completely insulated and tested it can be cover with dirt and measured finally before coupling it to the electrical installation

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## Building a SCARA robot for acurate thermal measurements on power electronic systems.

Bacanu Bogdan<sup>34</sup> Harastasan Sergiu <sub>Rosca Andrei</sub>

**Abstract:** This article presents a robot used for temperature data acquisition in power electronic systems with the purpose of thermal map plotting. In this work a Selective Compliance Assembly Robot Arm (SCARA) type robot with four degrees of freedom is designed using 3D Computer Aided Design (CAD) techniques. All the parts in the final assembly were printed with additive techniques. The final assembly of the robotic arm is moved by 4 stepper motors, controlled with a development board paired with a Computerized Numerical Control (CNC) board for the stepper drivers. A infrared probe is located on the gripper for temperature measurement. The data acquisition it's being processed through the thermal probe opensource software and the XY values will be extracted and combined with the thermal samples at specific intervals. This data will be used in creating a heat map of an electronic system in running conditions. Finally, the results will be presented and discussed.

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## IoT ambient monitoring system between education and research

Karina-Rosina Schaser<sup>35</sup>

**Abstract:** This paper aims to reach the point between education and research in terms of designing an IoT ambient monitoring system, which can be taken from a simplistic level to an advanced level. This project presents the steps that any technology enthusiast can follow to implement a system like this. ESP8266 NodeMCU is used as a web server with DHT11 temperature and humidity sensor as input. The microcontroller communicates with a router and the router communicates with the web through an IP address. The communication is bi-directional. When any connected device accesses this web server, ESP8266 NodeMCU reads the temperature and the relative humidity from the sensor and sends it, through the router, to the web browser of that device. The website is created using basic languages like HTML, CSS, and JavaScript.

I started this project with the idea of enabling any user to intelligently monitor their temperature and relative humidity in the environment they want to. It is a basic IoT project that can be developed into something more professional.

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# Implementation of an electronic system for automation and control of a greenhouse

Hălălișan Florin Marian<sup>36</sup>

**Abstract:** The paper is intended to be an elaborate approach to the presentation, analysis and simulation of an electronic greenhouse monitoring and control system. The work is implemented in practice and helps to automate the activity in greenhouses. This paper is especially aimed at both electronics and gardening enthusiasts.

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### INTELLIGENT SYSTEM FOR MONITORING AND CONTROL OF AN INDUSTRIAL PROCESS

Cutean Maria Laura<sup>37</sup>

**Abstract:** The paper is intended to be an elaborate approach to the presentation, analysis and simulation of an intelligent system for monitoring and controlling an industrial process. The work is implemented in practice and helps to monitor and control industrial activity. This paper is especially aimed at such electronics enthusiasts but finds its maximum involvement in modern industrial systems.

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# Intelligent system for monitoring and controlling agricultural areas

Jinar - Stanciu Camenlia<sup>38</sup>

**Abstract:** The paper is intended to be an elaborate approach to the presentation, analysis and simulation of an intelligent system for monitoring and controlling an agricultural area. The work is implemented in practice and helps to monitor and control the activity in agricultural areas. This paper is especially aimed at both electronics and gardening enthusiasts.

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#### Development of eco-sustainability in civil engineering

Vinersar Ioana<sup>39</sup> Pușcaș Flavia Gulova Alexandra

**Abstract:** Our project is based on the development of eco-sustainable constructions in order to minimize construction waste and minimize the negative impact on the environment. We want to increase energy efficiency and at the same time provide health, comfort and user safety as well as make it easier for builders with a design that can be disassembled without resulting in a lot of construction waste. By using sustainable materials we will also develop a better economy of the country and we will help a better sustainability at national or even global level.

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# Complex of topo-cadastral works for the extension of the quarry exploitation area

Seician Vasile<sup>40</sup>

**Abstract:** Excavation work in the quarry and the smooth running of the extraction and transport of raw materials are dependent on adequate access routes. Thus, as quarrying expands in area, the road transporting the raw materials must meet the standards laid down by the legislation in force. The main objective of the work that I am going to tackle is to arrange the exploitation road for the development of the quarry, to launch actions aimed at its legal regulation, to obtain the right of way from the municipality for the people who have buildings in the perimeter in the vicinity, as well as a detailed study of the area under investigation.

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#### "ETFE - The Polymer Of The New Millennium"

Cristea Diana-Adela<sup>41</sup>

**Abstract:** ETFE stands for ethylene-tetra-fluoro-ethylene - a polymer based on flourocarbon. The main property of the material is that it can be used in thin and durable foils and wrapped in rolls.

It was designed to have high corrosion resistance and strength over a wide temperature range. ETFE has a relatively high melting temperature and excellent chemical, electrical and high-energy radiation resistance properties. When burned, it releases hydrofluoric acid.

Projects that include the use of ETFE are becoming more common in all corners of the world. From the United States, passing through Europe, and continuing through Khazakstan to China.

Notable buildings and designs using ETFE as a significant architectural element: Eden Project, Cornwall, United Kingdom; Allianz Arena, Munich, Germany; Beijing National Aquatics Centre, (the Water Cube) Beijing, China; Institute of Technical Education, Singapore etc.

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# Virtual reality game development and optimisation with hand motion recognition sensor.

Erik Dobra<sup>42</sup>

**Abstract:** Virtual reality is an environment simulated by a computer that you can interact with.

VR replaces reality with an imaginary world that can be seen through a special head-mounted device (HMD). In this environment, hand tracking is an important task. Many devices do not have this functionality, or it is not sufficiently accurate. It is common that hand tracking is designed to follow a special hand controller, even though many applications would require the use of one's own hand.

In this thesis I would like to demonstrate the addition of a hand tracking device to VR glasses. In this assignment, I augmented Windows Mixed Reality type VR glasses with a leap motion sensor attached to the glasses, which allows hand tracking without a hand controller. The implemented solution was tested in a sample application. The theme of the game is horror, which encourages the player to react quickly. I used an alternative implementation of moving in virtual space in the application. The development of the control unit redesigned for virtual space was done in a Unity based project. The system allows players to perform specific gestures using the thumb and index finger, specifically to press buttons. I evaluated the software using the built-in profiling system, which shows what future optimizations are possible within the project. In summary, we have succeeded in creating a hand recognition system that tracks accurate hand movements in real time, which is a significant improvement in hand recognition implementation compared to the driver produced for the system.

<sup>&</sup>lt;sup>42</sup> Óbuda University Alba Regia Technical Faculty Institute of Geoinformatics

#### Inspection of wind turbines by UAV

Gergő Tóth<sup>43</sup>

**Abstract:** As the topic of my presentation, I chose the Inspection of wind turbines by UAV (Unnamed Air Vehicle). The audience of the lecture will get an insight into what controls should be carried out in some parts of the turbines onshore and offshore wind farms and how this can be solved by unmanned recording systems. I will describe the advantages and disadvantages of this method over the industrial alpine technique. Of course, I will talk about the legal environment that regulates the control activity of objects. I will also mention the qualifications required for someone to do this kind of work. I'll introduce you to the tools that can be used in the tests. I will also show the defects and injuries that are needed to be filtered out, and also how they affect the given turbine, what happens if they do not solve the problem. Some of the inspections are being done practically by aerial photogrammetry method, You will be acquainted about the important rules and knowledge related to this. I will also show you what computer software can be used to create the final product.

<sup>&</sup>lt;sup>43</sup> Óbuda University Alba Regia Technical Faculty Institute of Geoinformatics

# Role of physics-based approaches for environmental impact assessment

Saleh Al-Bashaish<sup>44</sup>

Abstract: Recently, there has been a lot of focus on mitigating environmental damage across the world. Economic activities often have beside direct positive desired effects, negative undesired impacts on environment and society, primarily caused by environmental pollution. In the present time human society is passing through transformation processes meaning relevant changes in almost all activity fields, and areas of human life. Considering environmental pollution reducing odds by different available tools means carrying out also Environmental Impact Assessment (EIA) of different activities. In this context it is to be mentioned that EIA is a planning method for predicting environmental impacts existing or planed activities. The term "environment" is used in environmental impact assessments to refer to a variety of factors that can be impacted by different human-related activities causing environmental damage, including pollutants emissions in the air, water, or soil, as well as radioactive contamination resulting from the release of a radioactive substance into a component of the environment such as air, water, or soil. Herein lies the role of a physics-based approach beside technological, chemical, and social based approaches by supporting to predict, analyze, model, and simulate environmental pollution. On the other side environmental protection plants are based on fundamentals of physics, beside chemistry, engineering, and other fields. EIA is usually achieved by conducting a study of an activity, city, or region, and by trying to analyze inputs and outputs to obtain results that limit environmental pollution for assuring sustainability of human society.

KEYWORDS: physics-based approaches, environmental pollution, environmental impact assessment, environmental protection, sustainable development

<sup>&</sup>lt;sup>44</sup> Technical University of Cluj Napoca

### INVESTIGATION OF OBTAINING BIO-COAL FROM LEAVES OF TREES

Aripov Ahatilla<sup>45</sup> Kamilova Areana Rakhimov Rustam

Abstract: Currently, one of the main tasks of scientists is to study the production of alternative energy sources, since harmful emissions from the production of various types of energy significantly affect the environment. Pyrolysis technology allows the production of bio-coal, which can be used to replace fossil energy fuels. Bio-coal can also be processed into liquid fuel for direct use in vehicles and replacement of petroleum products (gasoline, aviation kerosene and diesel fuel). The purpose of this work was to obtain bio-coal from the waste of fallen leaves of trees in Tashkent by pyrolysis. The experiments were carried out in a developed installation equipped with a control panel and a temperature sensor, two holes for the liquid part and for the supply of inert gas. Suspended impurities were removed by intensive rinsing with tap water, and then dried in the sun for four days. The dried leaves were pressed, then washed several times with distilled water, dried at 50-60 °C. Then the leaf powder was converted into bio-coal in an oxygenfree environment at 450 ± 5oC for 3-4 hours. Initial experiments showed that the liquid part of pyrolysis is a product containing mainly  $\alpha$ -olefins, nparaffin, 2,6-dimethylheptadiene, 2,4-dimethyl-1-heptene, 2-methyl-1octene, 2-methyl-2-octene, etc.

<sup>&</sup>lt;sup>45</sup> Tashkent State Technical University named after Islam Karimov

# 3D reconstruction of a mining site with UAV technology

Borza Carmen Daniela Ioana<sup>46</sup>

**Abstract:** Surveying technology currently offers us a multitude of benefits and can be used in many fields of activity to create a more efficient way of working for people.

This project aims to describe the process of 3D reconstruction of a mining site with UAV technology.

The first step means performing the actual flight in the targeted perimeter with a drone (or UAV – unmanned aerial vehicle) equipped with a camera to capture images of a site from different vantage points. Out of these images, a photogrammetry software can recreate geo-referenced 3D maps of the mining site. The processing of the cloud of points collected with the help of the drone is an important step of this project. Mining operators can also easily extract the precise volume of stockpiles or areas to be excavated. By providing thousands of data points for one stockpile, drone surveys are far more accurate than surveying with total stations.

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#### Study On Road Traffic Noise

Diana Cojoc<sup>47</sup>

**Abstract:** Noise is an obstructive sound or a mixture of discordant sounds, loud, harmful. Noise pollution is a type of environmental pollution that involves the presence of disturbing noises caused by various human activities. According to the latest European Environment Agency, 1 in 5 Europeans is exposed to noise levels considered harmful to health. One of the main human activities causing noise pollution is road traffic, which has increased dramatically in recent years, especially in urban areas. Traffic noise comes mainly from motor vehicles, which, being equipped with internal combustion engines, produce a high level of noise. In this study, we identified the main sources of road traffic noise, how to estimate and measure noise levels, the impact of noise on human health, and the management measures commonly used to reduce noise levels from road traffic. This study also presented the main parameters used for characterisation of the noise level and the maximum limits allowed by the legislation in force.

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#### Mercator cylindrical projection

Indres Petru<sup>48</sup>

**Abstract:** The Mercator projection is a system for the graphical representation of the Earth's surface on a map, for the purpose of making maps. Of the nearly 400 map projections that exist, Mercator is a type of cylindrical projection The maps obtained by this projection are especially useful for navigation charts, as it allows you to track routes using a straight line.

To solve the problem of projecting the Earth's surface on the plane, Mercator imagined the Earth inside a cylinder of the same diameter. Where the major or longitudinal axis of the said cylinder coincides with the axis of rotation of the earth.

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### "Scope of Land Scanning and 3D Modeling"

Popsoi Laurentiu<sup>49</sup>

**Abstract:** Currently, the technologies and software for spatial data processing, either local or general, are constantly undergoing changes for a better adaptation to processing and detailed monitoring of their behavior. As a result, terrestrial laser scanning technology is an efficient method of processing 3D point clouds and allocating X, Y, Z coordinates - the color as well as the value of the reflection.

The applicability of laser scanning has gained a wide and fast spread due to its precision and efficiency, in fields such as: topography, mining, architecture, archeology, monitoring, in civil constructions, 3D modeling, etc.

Currently, the use of terrestrial laser scanning technology is more often used because it is based on remote data acquisition, while allowing the visualization of volumetric geometries.

Likewise, 3D scanning allows complete mapping of the studied area and allows measurements to be made in hard-to-reach areas.

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## Information Technology Solutions of Online Mapservers and Map Hosting Websites

Levente Gulyás<sup>50</sup>

**Abstract:** Operation and structure of various Map hosting websites and databases were examined. Based on my experience, The OpenStreeMap map was selected and used to create the website and geoinformatics database. The completed application can be used in international, multilingual research and helps to collect data on geoinformatics research on fear of crime. The application is currently available in four languages. Stores line and polygon type data in GEOJSON format. Data can be exported in Excel compatible format.

<sup>&</sup>lt;sup>50</sup> Óbuda University Alba Regia Technical Faculty Institute of Geoinformatics

### Environmental Impact Assessment of Using Renewable Energy Resources

Saad Farooqi<sup>51</sup>

Abstract: Currently there is a relevant debate on a worldwide level regarding assuring odds of humanity energy consumption, as being the base of keeping, and increasing humanity quality of life by carrying out different economic activities. In the meantime it has become clear that fossil fuels are not the future solution for assuring sustainability of human society because of their limited availability, but also because of pollutants emissions connected to their usage. Taken all these considerations into account, it means that applying fossil fuels in the future is not desired anymore because of their undesired negative environmental impacts, much discussed nowadays being especially the global warming challenge. Several scientific events have emphasized these aspects, just to mention the United Nations Conferences on Environment and Development, so-called "Earth Summits" in 1992, 2002, and 2012. As a result the attention in last years has been oriented to the usage possibilities of renewable energy resources, as water, wind, solar or bio-resources. Several studies has but emphasized that the use of renewable energy resources is connected to not neglectable environmental impacts. In this contribution usage odds of renewable energy resources in different parts of the world will be debated, and also their potential environmental impacts.

 $<sup>^{51}</sup>$  COMSATS University Islamabad, Pakistan, Abbottabad Campus, Department of Environmental Science

# Applying renewable energy resources and their environmental impacts on regional level

Karam Alqalawi<sup>52</sup>

Abstract: It is a known fact that humanity needs for its development different materials, and products, as well as knowledge in different fields, energy resources being actually the base for transforming materials into products. Applying diverse categories of energy resources and generated challenges because of their usage are closely related to each other because it is almost impossible to produce energy without generating any environmental impacts. Currently main source of energy in urban areas is still generating considerable environmental impacts by air pollution. There are also many types of water pollution problems first of all because of waste water removal without any treatment. On the other side drawing can have as a result water pollution, as it leads to a change in groundwater flow caused by processes that lead to the mixing of polluted water with mineral resources or soil. Wastewater from the soil as acidic mineral water is exposed to diverse transfer processes. Generally environmental problems are increasing with the growth of energy use, and this, combined with a limited non-renewable energy resources availability, is the core of energy crisis challenges. Environmental impacts have to be carefully assessed for avoiding undesired negative effects on regional level for assuring human sustainability.

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## Increasing odds of environmental performance of urban water supply

Dan Cristian Ciontescu<sup>53</sup>

Abstract: In the time of rapid technological development humanity started to think about assuring his basic needs by using technological applications, being especially the case regarding energy, and water supply in urban areas. Human activities can have as a result beside wanted positive effects, also undesired negative effects. It follows that there is a need to assess economic activities not only by considering economic and technological aspects but also environmental ones. In this context the European Green Deal newly adopted by the European Commission has a considerable role. With regard to assuring population water consumption in cities there is a need to look at the whole water supply network, for recognizing potential environmental impacts, applying the life cycle assessment, LCA for water supply. Urban water supply network consists of several hydraulic networks, and for determining environmental impacts of water supply, his environmental footprint can be established on the whole way of water flow, this means environmental footprint of untreated water, of potable water, and of waste water. A case study will be taken into account for a concrete urban region, and environmental footprints will be established, conclusions being drawn for improving environmental performance of urban water supply.

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# Topographic and geodetic measurements at hydrotechnical objectives

Tăut Raluca-Mihaela<sup>54</sup> Bica Andreea / University Of Oradea Cearnău Naomi Amalia / University Of Oradea Ghiurău Bogdan-Andrei / University Of Oradea

**Abstract:** Students at Terrestrial Measurements and Cadastre specialization study various measurement techniques over their academic years, the main emphasis being on property- and cadastre-related activities and applications.

In this paper, we would like to present the specific use of topographic and geodetic measurements, as well as data analysis and visualisation methods, from a pure technical point of view (unrelated to cadastral data), applied at hydrotechnical objectives. The two main objectives presented in this paper will be related to the tracking of the behaviour of hydrotechnical constructions, as well as to the 3D modelling of the water retention basin, used for water volume calculations.

<sup>&</sup>lt;sup>54</sup> University of Oradea

## Modern Versus Classical Technologies In The Field Of Terrestrial Measurements

Bilan Maria – Rahela, Politehnica University Timisoara<sup>55</sup> Popa Alexandra – Elena, Politehnica University Timisoara Golda Cristian – Dieter, Politehnica University Timisoara Adrian Sadovan, Politehnica University Timisoara

**Abstract:** Knowledge of the territories, both as extension and content become necessary when humans began to be sedentary. So, terrestrial measurements science appeared. It evolved along with the time passing and the science and technologies achievements, which were constantly stimulated by the society requirements.

In this paper we want to highlight the importance of terrestrial measurements made with modern technologies (both software and measuring instruments). Also, we will exemplify it with a field application (round of directions) for which the data was acquired with classical and modern technology, and processed with classical algorithms and computer software.

Keywords: round of directions, digital theodolite, classical theodolite, computer software, classical algorithms, series method.

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# Astronomical angle measurement with the use of Newtonian telescope and DSLR camera

Sarah Hannah Berger<sup>56</sup>

**Abstract:** Our task is to measure angles for astronomical purposes using a Newtonian telescope and a DSLR camera. The paper includes overview of the construction and imaging of astronomical telescopes, instruments and DSLR cameras.

The aim is to go beyond numerical estimations to the determination of real values by measurements. From these measurements various conclusions can be drawn: the variation in the apparent size of the Moon due to its motion in an elliptical orbit, which can be used to infer the eccentricity of the orbit, the ratio of the distance of the perigee and apogee from the focal point, and the determination of the celestial velocity of the Moon, compared with its calculated value.

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### Innovative Performance In The Practice Of The Accounting Profession In The Republic Of Moldova

Ungureanu Viorica<sup>57</sup>

Abstract: Science is determined by innovation, and accounting is no exception. The professional reasoning in organizing the accounting activity within each entity in any field of the national economy, presupposes the implementation of technologies, innovations and the application of National Accounting Standards, IAS / IFRS, which can be influenced by taxation, level of experience, the quality of financial audit, as well as the attitude towards risk. The slowdown in the implementation of technologies and standards in the case of the Republic of Moldova has been influenced by the complexity of the adoption and implementation of IAS / IFRS, the imbalance of internal versus external beneficiaries, and the costs of implementing advanced technologies or innovations. The influence of factors (bureaucracy, formalism and professionalism) on the supervisory bodies of the Republic of Moldova has contributed to the slowdown in the full adoption of IAS / IFRS and innovations or technologies. The required direction at the moment is the digital domain, entities transiting from physical work in the office to the remote one, and which requires the moment of transition to the online environment of tools necessary for connection through technologies, to ensure data protection and to protect against cyber attacks. In this context, the emergence of several venture capital firms is possible. Every innovative idea needs to be reflected in Accounting Reports and Balance Sheets, for these reasons accounting is bound to crystallize truthful and current information, based on fair and true value.

<sup>&</sup>lt;sup>57</sup> State University of Moldova

# The fundamental step of financial reporting: the financial statement preparation process

Daniela Bancu<sup>58</sup>

**Abstract:** The purpose of this paper is to reveal the financial statement preparation process in full detail, as this is the fundamental step of financial reporting. One of the main objectives of an accountant is to provide accurate accounting information in the form of annual report, which can be achieved through conducting an efficient financial statement preparation process beforehand. Therefore, the paper includes the description of typical year-end closing procedures, such as: the inventory, the examination of the company's assets and transactions, the accounting of differences in foreign exchange rates, error correction, the accounts' closing etc. As a result of this research, the paper incorporates a year-end accounting checklist, which is a useful tool for an accountant.

Keywords: financial statement preparation, financial reporting, inventory, differences in foreign exchange rates, financial result

<sup>&</sup>lt;sup>58</sup> Academy of Economic Studies of Moldova

# Is progressive taxation better for the human development?

Marcus Radu Man<sup>59</sup>

**Abstract:** This paper aims to understand and quantify the impact of taxation on the Human Development Index. The countries taken in consideration for this paper are members of the European Union and the period overviewed is 2011-2019. According to the computation of the data relevant for this paper, progressively taxed countries have a higher Human Development Index than the ones that practice a flat tax system for income. Subsequently, the income tax as share of GDP is also at a much higher rate in progressively taxed countries than in flat taxed countries. Additionally, countries in the European Union that have a progressive taxed system also collect more taxes as share of GDP than the countries that have a flat tax system. Ultimately, this paper aims to reinforce the need for the European Union's member states that do not have a progressive taxed system to transition to one in order to have a fairer tax system that leads to a higher value of the Human Development Index and higher governmental revenues.

<sup>&</sup>lt;sup>59</sup> West University of Timisoara

## Expenditure accounting in vocational-technical educational institutions in the Republic of Moldova

Şchiopu Ana<sup>60</sup>

**Abstract:** In the last three years, the secondary and non-tertiary technical vocational education institutions (TVET) have moved to financial selfmanagement, which has led to specific problems in accounting the expenditure. This article deals with some problematic aspects of expenditure accounting for TVET institutions, namely: the regulatory aspects that determine the expenditure of the institutions; the definition, classification of expenditure in TVET institutions according to different criteria; the recognition and measurement of expenditure; the documentation and accounting of economic transactions concerning the expenditure of the institution.

The accounting of educational services in the TVET implies the need to develop a classification of types of expenditure according to the specific instructional-educational process in the institution and training programs offered by it, but also the complementary imperatives to ensure the conditions for this educational process as a whole.

Through this material we will provide solutions to the investigated issues, in particular regarding the determination of expenditures from cost-perstudent funding through state ordering and tuition fees according to the contract, as well as expense classification, recognition, measurement and accounting.

Key words: expenditure accounting, educational services, state order, secondary and non-tertiary technical vocational education institutions.

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# Estimating the drivers of Shadow Economy for EU countries: a MIMIC model approach

Ana-Elena Varadi<sup>61</sup>

**Abstract:** This research presents the concept of shadow economic activities, as well as its causes and implications within the formal economy, also evaluating the size of the shadow economies at the level of the European Union. Even though the informal sector started to decrease after 2010, it remains significant in Eastern European countries. Employing the MIMIC Model, we discovered that the causes that lead citizens towards working in the informal sector are the lack of quality in public administration institutions and reduced government efficiency. As expected, the highest level of shadow economic activity from GDP is in developing countries, more precisely in Bulgaria, with 38.5%, and the lowest one is in developed countries such as Austria and Luxembourg, both registering 9.67% of GDP. Even though the level of activities within the informal sector is still significant, the study indicates a declining trend since the 2008 Financial Crisis, especially in the countries of the ex-bloc Soviet Union.

<sup>&</sup>lt;sup>61</sup> West University of Timisoara

### The economic world in Christianity

Vlad Rades<sup>62</sup>

**Abstract:** The Bible is filled with so many teachings about economics and personal finances and people forget that. With this in mind, the lecture is proposing to take us back in the cultural world of the times where the Bible was written to have a better understanding of what it teaches about personal wealth, debt and finances. Do to be able to obtain the right understanding of this teachings we must study the politics, geography, culture, habits and other, as they were from 15th century BC and 1st century AD, that being the period when the Bible was written.

<sup>&</sup>lt;sup>62</sup> West University of Timisoara

### Efectele pandemiei asupra pieței asigurărilor CASCO

Basarabă Roxana Maria<sup>63</sup> Cealnîc Maria

**Abstract:** Tema aleasă face referire la efectele generate de pandemia COVID-19 cu privire la asigurările CASCO. În acest subiect abordăm mai multe probleme apărute în domeniul asigurărilor din cauza pandemiei și care îi vizează pe conducătorii auto.

<sup>&</sup>lt;sup>63</sup> "1 Decembrie 1918" University of Alba Iulia

### Regulatory factors impacting new businesses

Andrei Jaba<sup>64</sup>

Abstract: This paper consists of an analysis of numerous scientific publications regarding the subject of regulatory factors that are impacting new and existing businesses worldwide. A bibliometric analysis is conducted on a sample of 1780 articles collected from the Web of Science. The study qualitatively analyzes scientific papers and by means of bibliometric analysis, and through VOSviewer software, we determine four essential types of analysis: co-occurrence of keywords, where the results highlight the most common keywords business, barriers, government regulation and, business environment; co-citation of authors, identifying Porter, M. as the most cited author with 155 citations and 39 links; geographical distribution by country, where we observe the USA as the country with the most cited papers with 290 documents and 97 links; analysis of bibliographic coupling by organizations, where the results indicate a high number of papers related to universities from England (Harvard Univ and Univ Manchester) and South Asia (Univ Indonesia and Univ Teknol Malaysia). This study also evidences a significant interest in different geographical areas, especially in the USA, Europe, and Asia. The study revealed that the subject of regulatory policy is a significant one worldwide, therefore policymakers, as well as entrepreneurs, should actively be involved in ensuring a high quality of regulation.

Keywords: business environment, regulatory policy, bibliometric mapping, Web of Science, VOSviewer.

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## Rolul Raportului De Sustenabilitate Și A Raportării Integrate În Economia Organizațiilor

Crișan Elena Daniela<sup>65</sup>

Abstract: For some years now we assist to an important voluntary action regarding non-financial reporting of a large number of national and international companies that accompany financial situations yearly with a series of other informations with non economico-financial character. In essence, is a report of performance in the field of social and of medium sustenabilitations, with a special attention brought to the behavior of the company in front of their workers, at a more general level, the parts that are interested within the entities. This tip of non-financial report, is today more easier to accomplish using specified and standardized guides that identify schemes of reporting, accounting methodologies and specified KPI's. (Key performance indicators), it allows the efficient communications of the noneconomic aspects, even if its strictly bound to the company activity. The new forms of reporting are tangible expression of change of the economic and business paradigm, characterized by overcoming the classic approach to do oriented trades exclusively to the evaluation of the economico-financial performance, to head towards the dimensions of the economy circulary and of sustainability, of the medium, but also social.

<sup>&</sup>lt;sup>65</sup> "1 Decembrie 1918" University of Alba Iulia

### ADVERTISING AND PROMOTION OF PRODUCTS AT THE EXERCISE COMPANY

David Flavia<sup>66</sup> Miclea Georgiana

**Abstract:** Commercial advertising is a means of commercial communication, specific to consumer markets, which aims to influence consumer behavior by transmitting media messages. Channels used: print media, TV, telephone, radio, display, cinema, internet, etc.lt is a form of impersonal presentation that involves the use of paid means to create image and notoriety of the company, products and services intended for marketing. Commercial advertising needs time to become effective.

<sup>&</sup>lt;sup>66</sup> COLEGIUL ECONOMIC DIONISIE POP MARTIAN

#### Revenue and expense accounting

Paven Maria Ancuța<sup>67</sup> Birău Teodora

**Abstract:** The accounting of incomes and expenses supposes an overview of the situation of the entity from the point of view of financial resources, because the incomes and expenses are elements of the patrimony directly related to the determination of the result of the economic and financial activity. Information on income and expenditure is provided by the accounting, which requires the resolution of a number of theoretical and methodological problems regarding the formulation of definitions, classification, recognition, evaluation, elaboration of accounting policy, drawing up of primary documents, application of registers of records, use of accounting accounts and preparation of financial reports on income and expenditure. In addition to their fiscal importance, income and expenditure provide, through their economic analysis, important information about how the resources of society have been used and about the results obtained. The difference between the revenues and expenses recorded in the accountancy represents the accounting profit. Also, profit is the main indicator of economic performance that economic bodies use in analyzing the entity's situation in terms of efficiency and effectiveness of work.

<sup>&</sup>lt;sup>67</sup> "1 Decembrie 1918" University of Alba Iulia

# Analysis of the implications regarding the trading of Cryptocurrencies

Mateş Adelin-Nicolae<sup>68</sup>

Abstract: With the development of technology and its imposition in several sectors of activity, the emergence of a new monetary system was inevitable, an innovation of the contemporary economy, represented by the phenomenon of cryptocurrencies or virtual currencies, which is a decentralized form of payment based on the use of cryptography. , for securing transactions, which in recent years have benefited from a major interest among investors, becoming increasingly popular as a means of payment and exchange, both nationally and globally. The use of cryptocurrencies, as a means of exchange or as a placement of cash, generates economic benefits for investors, and not only, but also the assumption of a degree of risk, which can be managed by studying indicators of analysis on these instruments. Being a decentralized instrument, we do not have a competent institution to issue them, it is important to know how these cryptocurrencies are viewed in the jurisdiction of the states in which they are traded. Thus, through this article we aim to create an overview of the benefits and risks to which investors are exposed, establishing the main indicators that can be studied on cryptocurrencies, but also identifying how to treat these instruments in the jurisdiction of European states.

<sup>&</sup>lt;sup>68</sup> "1 Decembrie 1918" University of Alba Iulia

### Evaziune fiscală

Spătăcean Daniela Elena<sup>69</sup> Moga Iulia Denisa

**Abstract:** In this paper we intend to present aspects related to tax evasion, such as the two existing types of evasion, namely the legal one and the fraudulent one, that is, illegal. We will initially speak of legal tax evasion, which allows for the legal 'flight from taxation' without blatantly violating the law. Next we will talk in detail about fraudulent tax evasion, but also about the 5 types by which it is classified: long-term frauda, short-term frauda, "Phoenix" sindrome, the sindrome of "multiple companies" and insignificant manipulations . Next we will highlight and detail the punishments, as well as the sanctions for some cases of tax evasion, and our work ends with the conclusion of written ideas.

Keywords: crimal offence, VAT refund, Phoenix syndrome, insignificant manipulations

<sup>&</sup>lt;sup>69</sup> "1 Decembrie 1918" University of Alba Iulia

# The Analysis of the Private Health Insurance Market in Romania

Lechea Gabriela<sup>70</sup>

**Abstract:** Healthcare in Romania is mainly financed (around 75%) from public resources (government schemes and social compulsory health insurance), just less than 25% of total expenditure on health

coming from other sources such as co-payments, informal patient payments and payments from other insurance companies. The paper aim is to analyze the evolution of the Romanian Voluntary

private health insurance (VPHI) market in 2021-2022period of time and, based on the indicators analyzed and on the opinions from literature, to provide explanations of the evolution and some ideas for future development.

<sup>&</sup>lt;sup>70</sup> "1 Decembrie 1918" University of Alba Iulia

### Individual employment contract

Barbu Denisa Ioana<sup>71</sup> Bucerzan Larisa Denisa

Abstract: Law 53/2003 on the Labour Code defines the individual employment contract as: the contract under which a natural person, called an employee, undertakes to perform the work for and under the authority of an employer, a natural or legal person, in exchange for a remuneration called salary. Contractul may have the following features: it is a legal act, due to the fact that through it reciprocal rights and obligations between the employee and the employer are born, modified or extinguished, and they have complete freedom and will in establishing the clauses of this convention; it is a bilateral legal act, because unlike civil law, in which the contract can be concluded between two or more persons, in labour law, the employment contract can have only two parts; it is a bilateral contract, due to the fact that the parties bind each other to each other and to each other. The individual employment contract, in terms of the interaction between the will of the parties and that of the legal regulations, consists of two essential parts: A legal part; A conventional part. The individual employment contract may be concluded for an indefinite period, but also for a fixed period under certain conditions. The types of suspension of the contract are: suspension by law, suspension from the employee's initiative, suspension by agreement of the parties. Termination may take place in the following ways: termination by right; termination following the agreement of the parties, on a date set by them; termination as a result of the wishes of one of the parties, under the restrictive conditions of the legislation in force.

<sup>&</sup>lt;sup>71</sup> "1 Decembrie 1918" University of Alba Iulia

### Peculiarities of cryptocurrency taxation

Pașca Patricia<sup>72</sup> David Andreea Marina

Abstract: We chose this topic because the interest in virtual currencies has grown. Also in Romania the community of cryptocurrency users is expanding, so there are more and more questions about the declaration and taxation obligations related to the income from transactions with virtual coins. Among the most common are those related to the procedure of declaration, the amount subject to taxation and the time when the income becomes taxable. In Romania, transactions with virtual currencies were regulated for the first time in 2019, through Law 30/2019, which introduced in the Fiscal Code provisions regarding the taxation of income thus obtained. Basically, the taxation is carried out at the moment of converting in lei or in foreign currency the equivalent value of the held currencies, taking into account the NBR exchange rate from the moment of collecting the price in an official / recognized currency. However, the particularities of each platform must be taken into account. The mechanisms behind a simple conversion from cryptocurrency to conventional currency can be complex and not always visible to users in order to determine with certainty when the benefit leaves the virtual realm for the tangible, regulated one.

<sup>&</sup>lt;sup>72</sup> "1 Decembrie 1918" University of Alba Iulia

### Particularități privind veniturile și cheltuielile

Anghel Alexandra Maria<sup>73</sup> Podean Georgeta

Abstract: This study highlights possible differences, similarities and peculiarities of income and expenses. The notions of "income" and "expenses" are often found in the financial-accounting activity. In general, we have proposed to insist on personnel expenses, because in the life of a legal person 50% is interested in this, because it is an expression of value of total labor consumption. Revenues are encountered in everyday life, as a budget, which is presented in a form of money that a company receives from its activities, and an expense presents itself as a minus from the budget, because it refers to an amount of money given for something; rent, invoices, installments, etc. By the presence of this article, we decided to present where the expenses and incomes are located, what they mean in the financial-accounting activity, not only in everyday life, how many types they can be. This topic is an agenda, because as a legal entity there are also incomes and expenses that are presented as a topic sought after, especially by those who will open a business, v-or to know things about expense and income. That's why we want to present a topic with a lot of information that helps us and the rest of us, to find out new things and to apply the collected information.

Keywords: expense, income, money, activity

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### Rolul si importanta situatiilor financiare

David Andreea<sup>74</sup>

**Abstract:** The role and importance of financial statements

In order to obtain this information, an overview of the annual financial statements is required to determine the financial position and its performance. This information benefits both the company, as an internal factor, whose financial statements are analyzed as well as suppliers, customers, potential investors and any other person who wants to know information about the company, as external factors.

Economic decisions that are made by users of financial statements require an assessment of a company's ability to generate cash or cash equivalents and the period and security of their generation. Users are more likely to assess this ability to generate cash or cash equivalents if they are provided with information focused on the financial position, performance and changes in the company's financial position.

The profit and loss account is a summary accounting document, provided by the Accounting Law, which reflects the income and expenses of the company for a certain period, usually during a financial year and explains how the results are formed. It is important for the financial manager at the level of the entity, as well as the reasons that were the basis for their appearance.

<sup>&</sup>lt;sup>74</sup> "1 Decembrie 1918" University of Alba Iulia

### Property, plant and equipment

Hirțe Daniela<sup>75</sup> Șipoș Ariana Ștefania

Abstract: Property, plant and equipment

Virtually all enterprises, regardless of size or sector of activity, use tangible goods of a material nature, goods which are acquired, produced or received in other ways, with a view to sustainable exploitation. All of these tangible assets are normally called property, plant and equipment, production assets and in the cycles approach, material investment.

Property, plant and equipment, also called material assets or tangible fixed assets, represent durable material assets in the activity of an enterprise. They are found in the form of land and fixed assets (buildings, power machines and energy machinery, machinery, machinery and work installations, measuring, control and adjustment apparatus and installations, measuring, means of transport, working animals, plantations, tools, production accessories and household inventory.

If the material goods purchased or created by the enterprise are not finished, they are included in the category of current fixed assets.

Fixed assets lose their value over time as a result of wear and tear arising from their use. The accounting loss of fixed assets (except for land that does not depreciate) and inclusion in the cost is called depreciation.

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### Microenterprise Income Tax

Marica Florina<sup>76</sup> Ligia Moldovan, "1 Decembrie 1918" University Of Alba Iulia

**Abstract:** The tax-accounting regime applicable to a micro-enterprise has undergone a series of changes in recent years, which significantly amplifies the attention on the calculation of the tax and the completion of the declaration.

Taxation as a microenterprise has become the most widespread business tax system in Romania. A simple calculation shows that, at the same turnover, taxation as a microenterprise (1%-3% income tax) allows taxpayers to stay with more money than taxation as an ordinary company (16% corporate tax).

Although this legal form sounds promising, we still cannot neglect the challenges and interpretable situations that attract colossal fines.

The tax year of a micro-enterprise coincides with the calendar year, and if a micro-enterprise is established or ceases to exist, the tax year is the period in the calendar year in which the legal person existed.

Keywords: fiscal-accounting regime, microenterprise, income tax, tax rate, taxable base, fiscal year.

<sup>&</sup>lt;sup>76</sup> "1 Decembrie 1918" University of Alba Iulia

### Şomajul în contextul pandemic

Dreghiciu Corina - Daniela<sup>77</sup> Aftenie Maria

**Abstract:** Unemployment is one of the most complex socio-economic problems in the world. The presence unemployment has many negative effects. In general, unemployment hinders the social, economic and political progress of a country. During unemployment, the quality of life of the unemployed decreases, because the unemployment benefit is lower than the salary. This in turn generates poverty, which can culminate in deep social conflicts.

In this article, we use terms such as unemployment, technical unemployment and we will also analyze the relationship of potential workers to the Romanian labor market. There are several practices aimed at combating this harmful phenomenon. To conclude, we propose some solutions that can be implemented in states affected by unemployment.

Key-words: unemployment, technological unemployment market, economic system, types of unemployment.

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#### Income and expenditure accounting

Popa Andrea-Nicoleta<sup>78</sup> Cutean Ana-Denisa

#### Abstract: REVENUE AND EXPENDITURE ACCOUNTING

Enterprises must present, either in the income statement or in the notes to the income statement, an analysis of expenses using a classification based on either the nature of the expenses or their function within the enterprise. Revenues are defined as follows: revenues from sales, from stored production, from production of fixed assets, other operating income, interest income, other financial income, income from depreciation and provisions.Expenditure is structured according to the nature of the resources used as follows: expenditure on raw materials, materials and goods, expenditure on third party services, expenditure on taxes and fees, expenditure on salaries and staff, expenditure on interest, expenditure on taxes and duties, expenditure on staff , interest expenses, other financial expenses, depreciation expenses and provisions.The result obtained profit or loss is determined separately for each group, the operating result, the financial result.

<sup>&</sup>lt;sup>78</sup> "1 Decembrie 1918" University of Alba Iulia

### Public Audit in the European Union

Pașa Carolina<sup>79</sup> Cojocari Cristina

#### Abstract:

Public control is an integral part of democratic systems. All 27 countries that currently make up the European Union (EU) have put in place mechanisms to ensure accountability for public expenditure and to ensure that it is transparent and strongly supervised. This is where supreme audit institutions (SAI) as external public auditors come into play.

SAI shall examine in full independence the efficient, effective, and economic use of public resources, as well as the compliance of public expenditure and revenue collection with the applicable rules. They support parliamentary scrutiny of governments through their objective, impartial and fact-based audit reports, thus contributing to the improvement of policies, programmers, public administration, and the management of state finances. This contributes to strengthening citizens' confidence in the system of weights and counterweights of our societies and to the further development of properly functioning democracies.

In addition to promoting and developing accountability and transparency in governments, EU SAI also play an active role in supporting capacity building of public audit bodies in third countries.

Many of the 29 SAI in the EU and its Member States that are listed here can boast of a rich history (several centuries in some cases), while others have only recently been established in their current form. The structure, mandate and powers of most SAIs have evolved over time, sometimes because of political changes or public administration reform. The existence of an independent SAI is a condition for joining the EU.

Keywords: public audit, SAI, audit mission, Court of Auditors.

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# Influența sistemelor de inteligență artificială asupra politicilor și tratamentelor contabile

Negrea Mihai<sup>80</sup>

**Abstract:** Avansul IA în numeroase industrii a dus la dezvoltarea a noi viziuni în ceea ce privește modul în care profesioniștii își desfășoară activitatea, iar contabilitatea nu este o excepție, Inteligența artificială fiind o soluție pentru firme de a rămâne relevante într-o piață așa concurentă. Operațiunile realizate de contabili sunt acum efectuate de inteligența artificială (IA). Lucrarea încearcă o prezentare despre aplicabilitatea sistemelor informatice de IA, asupra firmelor de contabilitate și a utilizatorilor informației contabile . Pentru început voi prezenta noțiunile generale despre IA, apoi sistemele care fac posibilă conducerea contabilității, modul și componentele necesare implementării tehnologiei, impactul ei asupra activității economicofinanciare și mai apoi modalități de introducere și construire a sistemelor de analiză și calcul necesare în activitatea practică. Iar în urma cercetării, rezultatele obținute.

<sup>&</sup>lt;sup>80</sup> "1 Decembrie 1918" University of Alba Iulia

### Remuneration of employees in Romania

llea Cosmina Diana<sup>81</sup> Florea Georgiana Ionela

**Abstract:** In this project we will include the structures regarding the debts and receivables of salary nature, the content of the salary expenses, the deductions from salaries, the main basic elements regarding the calculation of salaries, the evidence and the accounting of the employees from Romania.

<sup>&</sup>lt;sup>81</sup> "1 Decembrie 1918" University of Alba Iulia

### Accounting and tax issues related to PFA

Grancea Marta<sup>82</sup> Ghiura Anamaria

**Abstract:** Keywords: PFA, accountant, the entity, a simple game, economic -financial, tax issues

One of the easiest ways for a person with training in a particular field to work individually is to enroll as an Authorized Individual (PFA). PFA is the ideal choice due to the small number of tax returns and low costs. Referring to such a PFA entity, the accounting carried out in a simple game, can be highlighted by the person who requested the establishment of the concept, as the law does not require you to use a legitimate accountant.

Authorized natural persons (PFAs) are responsible for recording records for accounting records that have been entered into since the inception of the entity, regardless of the area of professional development.

A taxpayer must comply with certain rules regarding the keeping, procurement and presentation of the single control register. Compliance with these rules will protect the taxpayer from possible penalties. At the same time, the taxpayers who obtain income from the development of individual activities, have the task of manifesting and keeping the accounting records within the simple item, in compliance with the regulations in force.

Revenue accounting in a single item of income is kept by income categories, such as income from activities that constitute: trade deeds, income from free professions, other income. It should be noted that the accounting records are kept in both national currency and foreign currency. Single-entry accounting must be kept in Romanian and in the national currency, and each economic -financial agreement must be recorded in the accounts in a supporting document.

<sup>&</sup>lt;sup>82</sup> "1 Decembrie 1918" University of Alba Iulia

# Financial audit vs Internal audit. Definition and differences

Coroiu (Botanel) Estera Adriana<sup>83</sup>

**Abstract:** The financial audit should not be confused with the internal audit. The financial audit is an objective evaluation of the financial statement of an organization, while the internal audit is an independent internal service to evaluate the performances of the organization. The objective of financial audit is to increase the confidence of users interested in financial statement. The external financial audit tends to happen annually. The internal audit is preventive and focus on risk management. The objective of internal audit is to ensure accurate financial reporting and to evaluate an organisation's internal controls.

<sup>&</sup>lt;sup>83</sup> "1 Decembrie 1918" University of Alba Iulia

# Around the world for fiscal benefits: a brief account on tax havens

Ciapa Cristian<sup>84</sup>

**Abstract:** This study offers a brief account on tax havens around the globe in order to facilitate the understanding of what tax havens are and whether they are useful or not. As a case in point, Luxemburg is included among the world's best tax havens, followed by the Cayman Islands and other territories belonging to the British Overseas Territories and Crown Dependencies (e.g., Gibraltar, Guernsey, Isle of Man, Jersey, Turks and Caicos). Such offshore financial centers have become more and more popular among investment banks, hedge funds, technology and software corporations, retailers, or oil and gas companies. The study details on major tax benefits obtained by the companies using the facilities of tax havens. It also tackles the negative externalities tax havens pose in general on global economies.

<sup>&</sup>lt;sup>84</sup> "1 Decembrie 1918" University of Alba Iulia

### Methos Of Payment And Tips&Tricks

David Mihaela Sorina<sup>85</sup>

**Abstract:** To succeed in today's global market and win sales against foreign competitors, exporters must offer customers attractive sales terms supported by the appropriate payment methods.

There are various payment methods and each has its own advantages and disadvantages for the buyer and for the seller as well.

Most people say that they have the best system for managing their own money. They all would usually say that cash is the only way to go. Cash is the KING OF JUNGLE, the oldest of them all. But we all know there are lots of other methods of payment among paying CASH in this era like a debit card, checks, a money order etc.

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# Internal Audit Mission at SC ELIS PAVAJE SRL (On-site intervention)

Voicu Ileana Claudia<sup>86</sup> Neag Ionela Carmen

**Abstract:** Internal audit is an independent, objective assurance and consulting activity designed to create value and improve an organization's operations. The topic addressed in this presentation refers to stage II of the internal audit mission, namely on-site intervention. We aim to prepare and organize the documents so that they represent a relevant, rigorous and solid documentary basis for forming an opinion on the audited objectives.

A qualitative analysis was considered as a research method, which involves the collection of documents, their analysis and evaluation by the actual field testing of auditable objects established by the On-site Intervention Program, by using the interview of audited staff, verification of accounting records, data analysis and information, evaluation of the efficiency and effectiveness of internal controls, conducting various tests, which are materialized in internal control questionnaires for the establishment of samples, checklists, tests, worksheets, interviews and relationship notes, documents that will be included in the report.

Key words: Internal audit, data and information collection, tests.

<sup>&</sup>lt;sup>86</sup> "1 Decembrie 1918" University of Alba Iulia

### Particularități privind veniturile și cheltuielile

Podean Georgeta<sup>87</sup> Anghel Alexandra Maria

Abstract: This study highlights possible differences, similarities and peculiarities of income and expenses. The notions of "income" and "expenses" are often found in the financial-accounting activity. In general, we have proposed to insist on personnel expenses, because in the life of a legal person 50% is interested in this, because it is an expression of value of total labor consumption. Revenues are encountered in everyday life, as a budget, which is presented in a form of money that a company receives from its activities, and an expense presents itself as a minus from the budget, because it refers to an amount of money given for something; rent, invoices, installments, etc. By the presence of this article, we decided to present where the expenses and incomes are located, what they mean in the financial-accounting activity, not only in everyday life, how many types they can be. This topic is an agenda, because as a legal entity there are also incomes and expenses that are presented as a topic sought after, especially by those who will open a business, v-or to know things about expense and income. That's why we want to present a topic with a lot of information that helps us and the rest of us, to find out new things and to apply the collected information.

Keywords: expense, income, money, activity

<sup>&</sup>lt;sup>87</sup> "1 Decembrie 1918" University of Alba Iulia

## Relevant income categories for financial support to local communities. Case study-community Bistra, Alba county

#### Balea Constantin Claudiu<sup>88</sup>

**Abstract:** Income underpins the economic development of the local community and is thus the key to the whole process of creating a better living and generating new jobs to support the population. The research methodology for the study of the chosen topic is based on the analysis and review of the literature and the use of the quantitative research method by carrying out analyses of indicators reflecting the level of budget revenues. The objectives of the paper are to analyze the degree of local financial autonomy, calculation and interpretation of indicators analyzing budget revenues at the level of Bistra municipality. The analysis shows that the degree of local financial autonomy was the highest in the year 2020 compared to the other years studied and the level of essential income is maintained at an average level, which is considered good for the financial support of the community.

Keywords: income, financial autonomy, local budget, indicators, finance, community

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### Internal Audit in Credit Institutions

Morcan Paula<sup>89</sup> Balea Constantin Claudiu

**Abstract:** From the point of view of the organization and implementation of the internal audit within the credit institutions, they must be based on objectivity and independence, bringing a significant contribution in terms of identifying the problems encountered by the banking system. Research methodology consists in reviewing the specialized literature related to the studied topic. The objectives of this paper is to analyze the role of internal audit within credit institutions, as a result of the audit process, a clear overview is outlined in terms of the correctness of the way of reporting the financial statements so that they reflect the reality. The results of the audit report are essential for the credibility of the audited institution, as well as for establishing its position on the market.

Key words: internal audit, credit institutions, banking system , financial statements

<sup>&</sup>lt;sup>89</sup> "1 Decembrie 1918" University of Alba Iulia

### The Risk Of Fraud In The Internal Audit

Chiperi Mihaela<sup>90</sup> Mocan Andreea, "1 Decembrie 1918" University Of Alba Iulia

**Abstract:** Obtaining accurate and probative evidence influences the exposure of an independent and objective opinion by the auditor. Audit risk assessment is the basic step in establishing working methods, techniques and procedures at the stage of collecting audit evidence. This paper aims to define fraud and the risk of fraud, its classification as an inherent risk in reporting the auditor's opinion. The literature review represents the research methodology in the field of internal audit on financial fraud. The results of our research show that financial fraud has a direct impact on the assessment of audit risk in the current economic context in the likelihood of a Community economic-financial crisis.

Keywords: Audit, Risk, Fraud

<sup>&</sup>lt;sup>90</sup> "1 Decembrie 1918" University of Alba Iulia

### The Role Of Internal Audit And Corporate Governance

Dumitrița Dutca<sup>91</sup> Adriana Picerea

**Abstract:** Corporate governance is a key element in improving efficiency and growth, as well as increasing investor confidence. .Our paper aims to present the concepts of Corporate Governance in Internal Audit, defining the concept of corporate governance, defining the concept of internal audit, Identifying the role of internal audit in corporate governance Corporate governance also provides the structure by which the company's objectives are set and the means of achieving these objectives and monitoring performance are determined. The research contains both quantitative and qualitative methodologies. The research results show us the relationship between internal audit and corporate governance developed and consolidated a series of mechanisms necessary to improve the differences between various parties on the impact on governance and audit internal.

Key words: Internal Audit ,Corporate Governance, Internal Control, Internal Audit,

<sup>&</sup>lt;sup>91</sup> "1 Decembrie 1918" University of Alba Iulia

### Stage of elaboration of the internal audit mission

Vinerean Alexandra<sup>92</sup> Onețiu Florina Madalina

**Abstract:** In the present study we made a presentation of the stage of elaboration of the report of the internal audit mission at ELIT SRL, where we established the following objectives: to define the internal audit, to present procedure 11 of the internal audit mission to ELIT SRL, to analyze the presented data and to make a connection with the theory in the field, and to present the aspect of the procedure. The internal audit mission aims to examine the actions on the financial effects on the account public funds or public patrimony, in terms of compliance with all principles, the procedural and methodological rules that are applied, ie the internal auditor verifies whether the rules and procedures are well applied and if the relevant regulations are in place respect.

The purpose of this paper is to present the general framework, objectives, findings, conclusions and recommendations made by internal auditors. Regarding the preparation of the internal audit report, the auditors use the audit evidence recorded in the identification sheets and analysis of the problems and in the form of finding and reporting irregularities. Internal audit means the work involved in helping organizations achieve their stated objectives. The internal audit performs this using a systematic methodology for analyzing business processes, procedures and activities in order to highlight organizational problems and recommend solutions.

<sup>&</sup>lt;sup>92</sup> "1 Decembrie 1918" University of Alba Iulia

## Tratamentul contabil al veniturilor prin prisma IFRS 15 "Venituri din contractele cu clienții"

Violeta Codrean<sup>93</sup>

**Abstract:** The dynamism and magnitude of the evolution of economic and social life have led to the development of society as a whole and the progress of economic structures. In these circumstances, the needs of users of financial-accounting information become more and more extensive, so that the entities have the obligation to adapt their information to the market requirements. This paper aims to highlight the main issues arising from the adoption and application of IFRS 15 "Revenues from contracts with customers". At the same time, the aim is to analyze the main sectors on which the standard has had a considerable impact in terms of revenue recognition methodology, such as the aerospace industry, construction, licensors, software, telecommunications, real estate and others. Therewith, some examples have been illustrated to highlight the impact of this standard.

Keywords: IFRS 15, customer contracts, revenue recognition

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### Internal Auditing Effectiveness

David Gianina<sup>94</sup> Comsa Roxana, "1 Decembrie 1918" University Of Alba Iulia

**Abstract:** A central focus area for internal audit is efficiency. However, we often fail to establish whether the internal audit function is working effectively. Through this research we aim to determine the basic objective of internal auditing, establish the objectives to be achieved, determine the measures to achieve these objectives, and finally evaluate the overall internal audit process. The research method used was the literature review on determining cost effectiveness and operational improvement aspects of the internal audit process. The result of the study conducted shows the major implications that internal audit has in managing and reporting financial statements accurately so that the data reflects the reality with the lowest margin of error.Therefore the established measures of internal audit effectiveness.

KEYWORDS: internal audit, effectiveness

<sup>&</sup>lt;sup>94</sup> "1 Decembrie 1918" University of Alba Iulia

## The evolution of internal audit during the Sars Covid-19 pandemic

Popa Mihaela<sup>95</sup> Popescu Maria

**Abstract:** In the context of the current events and due to the scale of the global pandemic created by the SARS COVID-19 virus, the way of conducting the audit has changed. It is more than obvious that this pandemic crisis is one of the most disruptive health crises ever known and has had a significant impact on the evolution of several areas, one of them is internal audit. Following the research undertaken, it becomes clear that the role of internal audit in risk management will have to become a strategic one, with a particular focus on the category of operational and strategic risks. Internal audit activity in public institutions during a pandemic cannot be stopped or suspended. Internal public audit must adapt to the new situation, take a proactive role.

Keywords: pandemic, crisis, internal audit JEL: M42

<sup>&</sup>lt;sup>95</sup> "1 Decembrie 1918" University of Alba Iulia

### The evolution of digital DJ - ing

Gabriel Claudiu Hategan<sup>96</sup>

**Abstract:** In the last 20 years DJ-ing had a massive change from analog vinyls to a digital setup. Algorithms have changed the way we interact with music. Not only that the music quality has improved, but we are now able to see the tracks we are playing, edit them in multiple ways on the fly and mix multiple sources, automatically adjusted in speed, key and beat sync including a ton of effects, instantly. This is probably the biggest improvement for creative DJ-ing in music history.

The purpose of this paper is to present and perform a critical analysis of how DJ software has changed over a period of over 20 years, and shifted the focus from just mixing tracks to manipulating music, using filters and effects and creating a whole new experience on the fly.

<sup>&</sup>lt;sup>96</sup> "1 Decembrie 1918" University of Alba Iulia

#### Metadata. Understanding the dangers of metadata.

Petru Lupu<sup>97</sup> Emil Neer

**Abstract:** Image metadata can contain various personal information. Uploading default images may pose a security risk, as bad people are always searching for ways of scamming or hurting others on the Internet.

One way to prevent such risks is to manually delete that information. The current project will help users store images, view their metadata, and allow them to delete any of them.

To build an app that is efficient and user-friendly, we use several JavaScript libraries such as Piexifjs, NodeJs, and npm.

<sup>&</sup>lt;sup>97</sup> "1 Decembrie 1918" University of Alba Iulia

## Web Application for Storing and Administrating a Movie Collection

Andrei Musteață<sup>98</sup> Adrian Mircea Mircea, "1 Decembrie 1918" University Of Alba Iulia

**Abstract:** "Front-end" and "back-end" are two common buzzwords used in discussions about app development. They basically divide the task of an app developer into two categories, as a front-end developer and a back-end developer demand different sets of expertise. In order to shed light on this topic of app development, we will have a look at both front-end and back-end development and see how they differ and work together.

Front-end and back-end developments are very different, but both are important players in the same game. The front-end would not work effectively without a proper back-end architecture. And without a front-end, the back-end would be impractical. Both are in constant communication with one another to ensure that the user experience is always ideal. This research paper sheds a light on the web programming aspect and other supporting technologies used for the front-end and back-end in web apps.

<sup>&</sup>lt;sup>98</sup> "1 Decembrie 1918" University of Alba Iulia

#### Blockchain Automated Market Makers: How it works

Alexandru Eugen Găzdac<sup>99</sup> Adelin Andrica, "1 Decembrie 1918" University Of Alba Iulia Adrian Vasile Fălămaș, "1 Decembrie 1918" University Of Alba Iulia

**Abstract:** This paper aims to address a type of automated marketers (AMM's) used primarily on the blockchain. AMM's are on the blockchain, maintain liquidity in the chain, and offer transparent mechanisms for price creation. This innovation is a significant step towards building a more transparent and efficient financial market. The paper analytically explores the mechanisms of AMMs and discusses the design of efficient decentralized exchange compared to traditional Central Limited Order Registers (CLOBs) and highlights the potential of the former in terms of decentralized financing.

<sup>&</sup>lt;sup>99</sup> "1 Decembrie 1918" University of Alba Iulia

### Determining Tweets Location: A Case Study

Alexandru Crestin<sup>100</sup>

**Abstract:** With the growth of social media, data science has become an important domain, allowing researchers to get insight into what drives conversations, who are the main actors and how people react to notable events but the most important is where do they come from. It is quite interesting to observe how people in a specific region think. Mass media from different regions spreads lies or the truth. Many questions could be raised.

<sup>&</sup>lt;sup>100</sup> "1 Decembrie 1918" University of Alba Iulia

### USI - University Student Information

Nicolae Topala<sup>101</sup>

**Abstract:** USI (University Student Information) is a WEB Application that focuses on students' need of simplicity and effectiveness in regard to getting and printing the individual's information. The basis of the project is to address weaknesses and improve strengths of current university methods of communicating the student's information to them.

<sup>&</sup>lt;sup>101</sup> "1 Decembrie 1918" University of Alba Iulia

# Means of storing and visualizing a context-free grammar in computer memory

Matieș Laurențiu-Ciprian<sup>102</sup> Rad Daniel-Emanuel, "1 Decembrie 1918" University Of Alba Iulia

**Abstract:** Linguists have concerned themselves over the past decades with the study of grammars, which are split into four categories: Type-0, Type-1, Type-2 and Type-3, according to the Chomsky hierarchy. Out of all four types, Type-2 grammars, also known as context-free grammars, can generate the sentences of a human language or the syntax of a programming language.

Considering this propriety, there is a high potential for automating the generation of sentences (or syntax, in case of programming languages) and checking whether a sentence belongs to a language (or compiling, in case of programming languages). In order to achieve the mentioned goal, there needs to be a well-defined data structure for storing the rules of a grammar and a way to visualize the data structure in order to better understand it.

Three potential ways of storing the rules of a grammar are: an array of characters, an array of linked lists and a table, the latter two being closely related. To solve the problem of visualization we have developed a Java program that takes the grammar rules as input and outputs the visual representation of the three considered data structures.

Keywords – formal languages, Chomsky hierarchy, context-free grammar, data structure, Java

<sup>&</sup>lt;sup>102</sup> "1 Decembrie 1918" University of Alba Iulia

#### Automatic Data Backup Management Tool

Mărginean Horațiu-Vasile<sup>103</sup>

**Abstract:** A data backup is a copy of computer data taken and stored somewhere else for safekeeping until the need arises for its restoration, typically in the event of a data loss. It is customary to employ the use of various compression algorithms to reduce the resulting size of the data and to store it inside an archive for easier portability and storage. It is also very useful to have these data backups performed on a schedule to reduce maintenance and provide reliability. I have developed a desktop application that incorporates these primary features, among a number of others as well.

<sup>&</sup>lt;sup>103</sup> "1 Decembrie 1918" University of Alba Iulia

#### Data mining models for facebook data

Petras Octavian-Vasile<sup>104</sup>

**Abstract:** This project aims to find the most appropriate classifier for facebook large page network. I applied data classification techniques (Classifiers based on decision trees, Classifiers based on decision rules, Vector-supported machines, Classifiers of the k-nearest neighbor type, Bayesian classifiers). The attributes of data set are: id , page nume , page\_type.

In the experimental stage, we noticed that the JRip decision-based classifier, the bayesian network and decision tree were the best match for this application.

<sup>&</sup>lt;sup>104</sup> "1 Decembrie 1918" University of Alba Iulia

## Sustainable Development And Engeneering: Informatics

Denis Bodrug<sup>105</sup>

**Abstract:** The research made entitled "SUSTAINABLE DEVELOPMENT AND ENGINEERING: INFORMATICS" is about the process that some affiliated students went through while creating projects. Even though the projects themselves were for different subjects, we can observe a correlation between informatics and other subjects. The research paper will conclude on the matter of the importance of informatics in day-to-day life, as well as obstacles that were overcome. The withdrawn conclusion is nonbiased and approaches the subject from a professional viewpoint. The paper will also conclude on the performance of the students, as well as the teaching progress and easiness as a whole. The purpose of the article is to acknowledge the potential, the growth directly observed, and the need for guidance for students. All of this isn't only for the development of the future, but also for achieving an ultimate goal, which will then represent only the beginning.

<sup>&</sup>lt;sup>105</sup> IPLT "Ion Creangă"

### Site educațional TERMODINAMICA

Oprea Lucian<sup>106</sup>

**Abstract:** Site-ul TERMODINAMICA, creat cu aplicația Web Page Maker, tratează transformările simple ale gazului ideal, principiile termodinamicii și motoarele termice în patru timpi Otto și Diesel, noțiuni studiate în clasă a X-a liceu.

Acest site poate fi utilizat în procesul de predare-invatare, atât în sistemul online, cât și în cel fizic.

<sup>&</sup>lt;sup>106</sup> Liceul Tehnologic "Alexandru Domsa" Alba Iulia

### Site educațional DINAMICA

Lula Attila<sup>107</sup>

**Abstract:** În acest site am tratat principiile mecanicii clasice și anume principul inerției, principiul fundamental, principiul acțiunii și reacțiunii, principiul suprapunerii forțelor și principiul relativității în mecanica clasică. Am tratat de asemenea tipurile de forțe și legile din care au fost deduse.

<sup>&</sup>lt;sup>107</sup> Liceul Tehnologic "Alexandru Domsa" Alba Iulia

### Operații cu vectori și scalari

Bidiga Ana-Maria<sup>108</sup>

Abstract: În acest site am prezentat operațiile cu vectori și caracteristicile vectorilor și anume definiția mărimii fizice vectoriale, precum și caracteristicile mărimilor fizice scalare. Operațiile cu vectori tratate sunt adunarea vectorilor după cele trei reguli: regula paralelogramului, regula triunghiului și regula poligonului, scăderea vectorilor și descompunerea unui vector după două sau trei direcții. Am prezentat în continuare produsul scalar a doi vectori cu exemple și proprietăți, apoi produsul vectorial a doi vectori unde am dat două exemple.

<sup>&</sup>lt;sup>108</sup> Liceul Tehnologic "Alexandru Domsa" Alba Iulia

### Site educațional - CINEMATICA

Bidiga Adrian Nicolae<sup>109</sup>

**Abstract:** În acest site am descris mișcarea mecanică și mărimile fizice caracteristice acesteia, fără a lua în considerare cauzele mișcării. Am definit vectorul deplasare, viteza și accelerația, apoi am dedus și am reprezentat grafic legea mișcării pentru mișcarea rectilinie uniformă.

<sup>&</sup>lt;sup>109</sup> Liceul Tehnologic "Alexandru Domsa" Alba Iulia

## Hands-on, peer-to-peer learning in the STEM Community

Fica Andrei Sorin<sup>110</sup> Nagy Rareș George Levitchi Daria Toma Codrin Eduard

**Abstract:** Hello! We are Team Xeo and we've learned to make robots in a very unique and fun way. FIRST, the organizer of our competition, encourages us and thousands of other teams all over the world to gain STEM knowledge and skills in a hands-on way and peer-to-peer learning is a big part of all of this. We've gotten used to working together in order to solve problems and innovate at every step and our objective in writing this paper is to encourage other students, both younger and older than us, to start learning technical skills this way, either through FIRST programs or outside of them.

<sup>&</sup>lt;sup>110</sup> "Horea, Closca si Crisan" National College, Alba Iulia

#### Breeze Air Quality Monitor

Gabriel Radu<sup>111</sup> George Bogdan Trîmbițaș

**Abstract:** Today's technology gives users the ability to build and program their own electronic devices. Breezy is an Arduino project based on sensors, an ambient air monitor and in addition it has alarm functions for critical situations, giving the user information about the atmosphere he breathes (the temperature, the humidity, the pressure, the concentration of volatile organic compounds) but also audible and warning signals when the values exceed the maximum allowed and constitute a potential danger. The serial interface (Serial Monitor) and an LCD screen were used to display the data provided by the sensors. Although temperature and relative humidity can be measured in different projects, using separate sensors, but we used a BME280 sensor that can simultaneously measure both physical quantities and atmospheric pressure. The reason is that most people are interested in finding out the values of these quantities in their own homes or at work. We also developed a smoke and flammable gas detector, based on the use of the MQ-2 sensor.

The project is based on a development kit, it is very easy to assemble and together with the software they make it a very efficient way to learn Arduino programming and simple notions of electronics.

<sup>&</sup>lt;sup>111</sup> COLEGIUL NAȚIONAL "TITU MAIORESCU" AIUD

#### Educational toys in children's development

Boca Eugen Gabriel, Liceul Teoretic Teiuș<sup>112</sup> Groza Alexandru, Colegiul Național "Decebal" Deva

**Abstract:** The toys were and are given by adults to children from an early age. The toy industry and especially the educational toy industry have developed a lot in recent years. These types of toys are more and more often chosen and used both in the family and in kindergartens as well as in primary school.

The aim of this paper is to present the importance of educational toys in children's development. We also want to present some of our favorite types of toys, which took up a lot of our free time. We will analyse, and later mention what was the influence of these toys in our development and what we learned along the way.

<sup>&</sup>lt;sup>112</sup> Liceul Teoretic Teiuș

#### MetaRoyal

Alex Bordean<sup>113</sup>

**Abstract:** MetaRoyale is a Battle Royale multiplayer online game, set in a medieval world: 50 players fight for victory, win the last player or team left alive. Caught on an island, they have access to various weapons such as the bows and the swords, all players being forced by a cloud of toxic gas to evolve into the smallest spaces.

What sets it apart from the rest of the Battle Royale games is the opportunity to earn money while playing. You can increase your winnings by buying various skins with the help of the game-specific currency.

I chose to use Unity 3D because it is a powerful, flexible and easy to use game engine, we can write code code in Java Script or C # all integrated in Microsoft Visual Studio IDE. The original game MetaRoyal is a very effective educational software in developing the entrepreneurial skills of young people, while learning some knowledge of strategy. Also, any educational software develops ICT skills (Information, Communication, Technology).

<sup>&</sup>lt;sup>113</sup> COLEGIUL NAȚIONAL "TITU MAIORESCU" AIUD

#### **BINARY TO DECIMAL**

Rareș Popa<sup>114</sup>

**Abstract:** Today, technology offers us the opportunity to explore all corners of the world, but not many people dare to explore the world of the computers. I began my adventure in exploring computers with the purchase of an Arduino kit.. Binary to Decimal is my first project in which I tried to understand how computers work and how the binary system works. With the help of an Arduino, OLED display and Shift-Register 74HC595 I managed to build a project that converts any 8-bit binary number to a decimal one. Even if the complexity of the project is not the greatest, during the construction of the project I learned how it works ic 74HC595 and how to use an information transmission protocol, called I2C, used to use the OLED display.

I believe that learning to use a computer at the most basic level is extremely important for every programmer, and by using simple circuits anyone can learn it.

<sup>&</sup>lt;sup>114</sup> COLEGIUL NAȚIONAL "TITU MAIORESCU" AIUD

## Reprezentări grafice ale proceselor termodinamice în rezolvări de probleme

Rebeca Docea<sup>115</sup>

**Abstract:** Destined to go through the "Ideal Gas Transformations" learning unit in the 10th grade physics curriculum, the graphical representations created with the Microsoft Excel application become an interactive way of learning, capitalizing on the creative potential of the student but also of the teacher. The project is structured in 5 learning sequences ( isobaric, isochoric, isothermal, adiabatic, polytropic transformations) translated into problems involving phenomena and analyzes from simple to complex,the situation assessments or boundary and extreme problems. I consider the physics problems that require graphical representations useful for understanding, describing, modeling and the mathematical interpretation of thermal phenomena.

Through virtual experimentation, we aimed both at a qualitative study of the state transformations that take place, and at obtaining data that can be processed, in order to make graphs and determinations of specific physical constants.

<sup>&</sup>lt;sup>115</sup> COLEGIUL NAȚIONAL "TITU MAIORESCU" AIUD

## "Audit and internal control in the public administration of the Republic of Moldova"

Timcenco Gabriela<sup>116</sup>

**Abstract:** The present work addresses a subject of permanent actuality and with a very important notation, because it brings to research the topic "Audit and internal control in the public administration of the Republic of Moldova". It contains definitions of public internal audit and internal public control according to the legislation in force, the role and importance of these processes in finalizing the existence and functionality of the public administration in the Republic of Moldova.

In fact, an audit report carried out by the Court of Accounts of the Republic of Moldova was analyzed, which finalized a more early perception of the audit and public control process in the local public institutions of level I.

<sup>&</sup>lt;sup>116</sup> "1 Decembrie 1918" University of Alba Iulia

## The structure of financial control and EU mechanisms for ensuring management and audit responsibility

Timotin Tinca<sup>117</sup>

**Abstract:** From all official EU documents we conclude that financial control means the whole and the interconditioning between internal control, internal and external public audit. As the European Union's (EU) independent external auditor, the European Court of Auditors seeks to contribute to the transparency of EU governance and to accountability for the act of management. The European Court of Auditors carries out its audit work in an interinstitutional framework established mainly by the Treaty on the Functioning of the European Union (TFEU) and by the Financial Regulation applicable to the general budget of the EU. Public financial audit institutions are an important component of ensuring accountability. Their main objective is to ensure independent, effective and credible control over the use of public resources. In conclusion, appropriate audit and accountability mechanisms for the management act are essential for the democratic scrutiny process.

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## Attachment Styles, Interpersonal Relations And Work Satisfaction

Mădălina-Ioana Rațiu<sup>118</sup>

**Abstract:** Each individual's work environment is the place where they work and where they spend much of their time. This environment offers daily challenges, both in terms of professional performance and interpersonal relationships.

The attachment styles of individuals influence the way interpersonal relationships are formed and the quality of these relationships throughout life. This is a starting point for studying the nature of the relationships that are developed by individuals in society, and even more so in the workplace.

Work relationships are not only determined by the interconnectedness of individuals according to their attachment styles, but they are also an important factor to consider when it comes to employee job satisfaction.

Thus, our work proposes to study the association between employees' attachment styles and their job satisfaction, with interpersonal relationships formed at work as a mediating factor.

<sup>&</sup>lt;sup>118</sup> "1 Decembrie 1918" University of Alba Iulia

#### IN-EXTENSO / INNOVATION FOR NEXTGEN EU / STUDENT'S CONFERENCE

#### Philokalia

Mocanu Diana<sup>119</sup> Condrea Ana-Maria

**Abstract:** Philokalia is the love of the Good, the Beautiful, prose anthology of Greek Christian monastic texts that was part of a movement for spiritual renewal in Eastern monasticism and Orthodox devotional life in general.

This term is about daily recollection of death and judgment, together with perpetual remembrance of God as omnipresent and omnipotent, and ceaseless prayer. It is through this compilation that the tradition of the "prayer of the mind."

Nowadays is a new view about God love for youth-christians.

Theology through the labyrinth of time is a silent way of love and gnosis through the deserts and emptinesses of life, especially of modern life, a vivifying and fadeless presence. It is an active force revealing a spiritual path and inducing man to follow it, to be receptive to the grace of the Holy Spirit who teaches all things and brings all things to remembrance.

<sup>&</sup>lt;sup>119</sup> Public Institution Theoretical Lyceum ,,Ion Luca Caragiale", Orhei

#### Salvation and faith - the way to a fulfilled youth!

Anastasia Motroi<sup>120</sup> Antonina Gargaun

**Abstract:** Through this article we wanted to address one of the main parts of life, youth, and analyze the goals and how we can achieve the goals through faith.

Life is God's gift to us. From birth to death, life is hierarchical. Knowing the stages of human life, each of us can make the general-human correlation, that is, to identify the common, obligatory moments of the thread of human life. The essence of human life has been divided into periods clearly configured as laws of growth, development and evolution.

The stage of life that requires a deep approach is youth. Time is the one that always leads us to a new and Christian life. The age of Jesus Christ is the age of the full man, the golden age. «Young people have had a very special place in the Holy Scriptures, in the life of our Church in general, and in its history in particular.

Young people need to draw close to God because Christ is the perfect man, the one who truly understands them, and is the »Way, the Truth, and the Life.Only a young man in search of eternal life or salvation can truly become a young missionary of great use to the life and mission of the Church of Jesus Christ. To free ourselves from passions, from the evils of all that is negative in life. »

<sup>&</sup>lt;sup>120</sup> IPLT "Mihai Eminescu" s. Sadaclia, Rep. Moldova

#### Challenges And Trends Of The Music Industry

Iurie Badicu<sup>121</sup>

Abstract: The article focuses on internal and external aspects of the functioning of the global music industry, by highlighting the main challenges of contemporaneity. The author analyzes the external factors of structural and functional influence, as well as the internal tendencies that occurred as a result of their confluence. The macroeconomic factor is presented by the researcher as beneficial for the development of the global music industry, but detrimental to the domestic (autohton) music industries. The research exemplifies important components of the local music industries that can ensure identity and performance. The cultural factor is assigned the role of axiological safeguard. The author reconsiders the music industry, as a transnational construct, highlighting its imperfection; due to the increased dynamics and oligopolistic type of the music market, based on over profitability. The trends in the field, towards digitization and forced virtualization, are analyzed in terms of opportunities due to the influence of social and technological factors on music activity. The research contains important elements of scientific novelty and cultural and economic forecasting, synthesized from the theoretical basis and practical experience of the author.

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## Engineer Victor Toma and the first romanian computers in the communist press

Gîndilă Alexandru - Daniel<sup>122</sup> Dreghiciu Sebastian Daniel Petruțiu Alexandru Florin

**Abstract:** This study is focusing on Victor Toma's life, his contribution in the world of technology, following carefully his most important project, the first Romanian computer developed and built in a communist country. Victor Toma is one of the most important Romanian engineers that founded the modern world by making Romania one of the first countries that built a computer. Besides that, his name was known by abroad being asked to develop computers in other countries as well.

<sup>&</sup>lt;sup>122</sup> "1 Decembrie 1918" University of Alba Iulia

## Literary and cultural magazines as models for promoting new discursive forms in 20th century Bessarabia

Edu Inga<sup>123</sup>

**Abstract:** As periodicals that configure the image of a nation's culture in a given historical period, literary (and cultural) magazines are distinguished from other magazines by the diversity of their studies and areas of research, because literature is not only an aesthetic and cultural field, but also a social, political, ethnic and ethical one, due to the broadening of its concept and scope of interpretation.

As an integral part of culture, the press is an institution that contributes to the promotion of certain political, social and cultural ideologies and directions. Changes in the political sphere instantly imply metamorphoses in other areas of life, for which the press becomes a form of promotion. Culture is an area in which contradictions are constantly stimulating each other on a variety of issues, one of the most far-reaching being the literary field. Throughout history, cultural magazines have consolidated themselves as formulas not only for the propagation of cultural ideologies, but also for the materialisation of polemics and controversies regarding the tendencies and orientations of the cultural/literary process, a fact that we will reflect in this article, focusing in particular on the 20th century.

Keywords: literary/culture magazines, historical development, literary discourse, ideology, socio-cultural phenomenon.

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## The Role And Economic Potential Of Romanian The Compossessorates

Nicolae Gheorghe Moguț<sup>124</sup>

**Abstract:** Compossessorate is an associative form with a long history in Romania.After the 1989 Revolution, compossessorates were regulated by Law 1 of 2000, then by Law 247 of 2005. A significant part of Romania's forests and pastures is in possession of these associative forms. The local communities depend a lot on the resources offered by these compossessorates, especially firewood and not only that. Rational exploitation of resources is mandatory.

<sup>&</sup>lt;sup>124</sup> "1 Decembrie 1918" University of Alba Iulia

#### Transforming Customer Satisfaction Into Loyality

Arnaut Fatima<sup>125</sup> Selma Bejtic

**Abstract:** One of the main features of great companies is their focus on achieving the satisfaction and loyalty of their customers so companies put it in the center of attention because the long-term success of any business depends on it. In order to be as successful as possible, companies put efforts to research the market in order to determine its needs as they could adjust their offer accordingly. Satisfaction is reflected through the degree of meeting the needs and expectations of consumers, and if these variables are met, they create positive feelings and attitudes about the company. This will result by a repurchase and recommending the company to family or friends, followed by consumer loyalty which brings many benefits to the company. Loyal consumers are constantly buying products and services of companies, and choose it before other competitors, which helps the company to achieve continuous income. Many companies are introducing loyalty programs to reward trust their customers they create numerous benefits depending on the frequency of their purchases.

An example of such a company is the "dm - drogerie markt" which is very successfull in achieving the satisfaction and loyalty of its customers and that is confirmed by his leading position in the drugstore market.

Key words: customer satisfaction, customer loyalty, dm drugstores.

<sup>&</sup>lt;sup>125</sup> "1 Decembrie 1918" University of Alba Iulia / Zenica University, Bosnia and Herzegovina

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#### The gravity of our eating habits

Lojecico Maria-Emilia<sup>126</sup> Lucian-Adrian Gavril

**Abstract:** Climate change describes a change in the average conditions such as temperature, rainfall, more intense storms, droughts and floods and ocean acidification over a long period of time.

Part of what makes Earth so amenable is its natural greenhouse effect, which keeps the planet at a friendly 15 °C on average. But in the last century, humans have been interfering with the planet's energy balance. Transport has become the largest emitting sector of the UK economy, accounting for 28% of UK greenhouse gas emissions in 2017. The pollutants indirectly influence every aspect of our life, from food and air to economic security. Another "bad" effect is that the carbon dioxide makes the ocean more acid. Animals including corals and snail cannot make shells and they will die.

Recent studies have shown how we can influence the health of our planet through our everyday life. For example: Avoiding meat and dairy products is the most efficient way to reduce your environmental impact on the planet. If you need to fly for work, consider using video-conferencing instead.

Everything we use as consumers has a carbon footprint. At this stage, a change is inevitable! By doing nothing we are killing ourselves.

<sup>126</sup> Lyceum "Litterarum"