

Collection of Abstracts



ბათუმის ნავიგაციის სასწავლო უნივერსიტეტი
BATUMI NAVIGATION TEACHING UNIVERSITY

სტუდენტთა საერთაშორისო
სამეცნიერო კონფერენცია
STUDENT INTERNATIONAL
SCIENTIFIC CONFERENCE

27 მაისი, 2020 | 27 May, 2020

Batumi / May 2020

Collection of Abstracts

Student International Scientific Conference

Batumi / Georgia

Orgnized by

The Batumi Navigation Teaching University

Date of Conference

27 May 2020

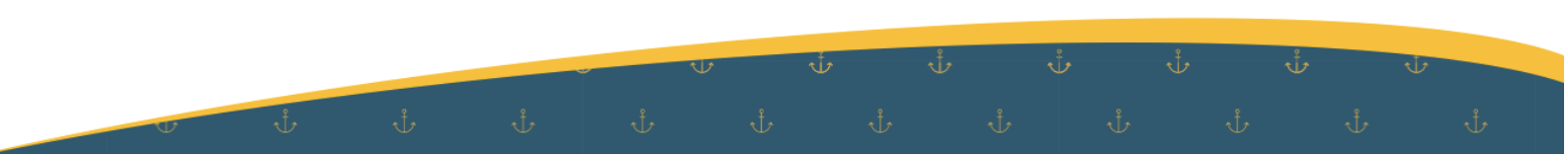
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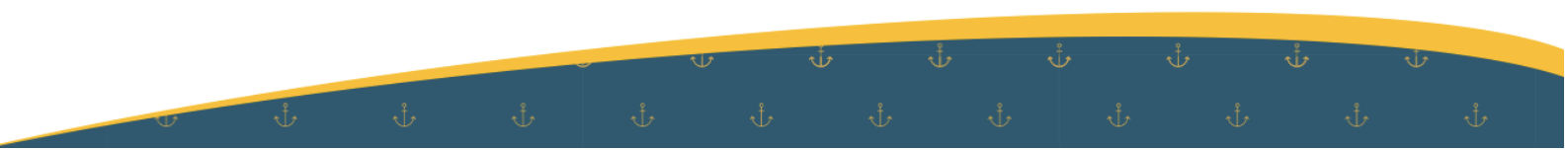
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Publisher: **Batumi Navigation Teaching University**

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Welcome Speech

Ladies and Gentlemen,

Dear students,

I am very glad that at this difficult time for whole world, each of you has expressed a desire to participate in the Youth Scientific Forum. We are more pleased that the conference is organized by our university.

Batumi Navigation Teaching University has been competing in the field of education for more than 20 years. Promoting student scientific-practical studies and research activities is our uncompromising priority. This year, BNTU is hosting the 4th International Student Conference. Its scope pleases us and deserves praise. The Internet has completely removed boundaries and distances that separate us and allowed us to freely share our thoughts, experiences and human kindness.

You, today's students, are the persons who, after 5, 10, 15 years, must decide the fate of this planet, you are the persons who must make the earth a much more protected and well-kept place. Everything we give you now and share with you, years later, you have to use for the benefit of your own countries and our world, and I am sure that we, your teachers and mentors, will feel pride in your generation.

I hope that next year, at the 5th BNSU International Student Conference, we will host you all in our wonderful coastal town - Batumi, Georgia.

I wish you a successful conference, health and many new achievements!

*Yours faithfully,
Rector, Master Mariner,
Prof. Parmen Khvedelidze*

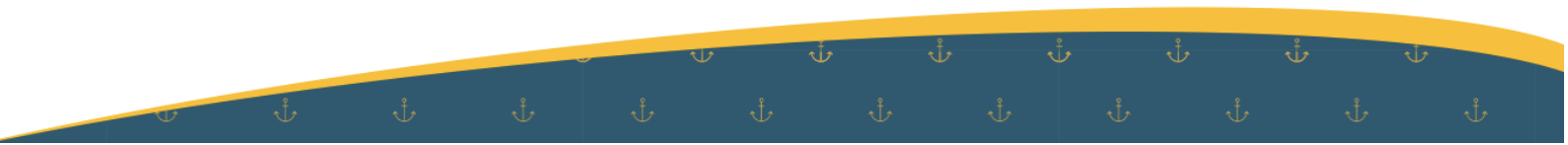
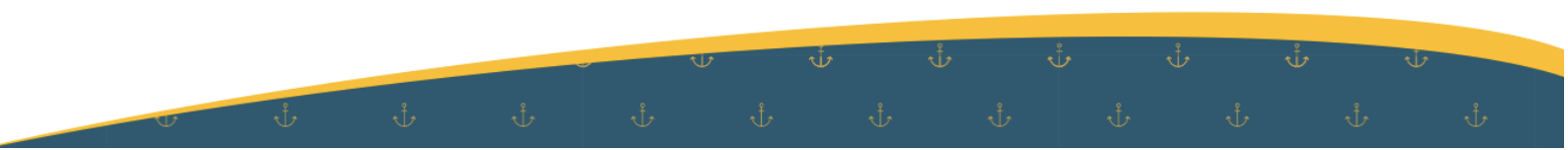


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Ship's Excessive Stability: Introduction to Students Scientific Research

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Abstract

Nearly eighty years passed since development of the very first international ships' stability criteria. Thus, the International Maritime Organization (IMO) introduced a new set of ship design criteria based on stability failure concept. These criteria may also be used for development of operational limitations and/or operational guidance that assists ship operators in severe sea state. The results of IMO's work have not been officially released yet – the draft has been developed so far - but the Member States are encouraged to share the experience gained from criteria testing or other research in this regard. This situation creates the opportunity to delve into incoming generation of the criteria and participate in their testing and implementation.

One of the stability failure mode contained in the set of new stability criteria is excessive acceleration in ship's rolling in terms of excessive stability.

The paper presents the plan of the research to be conducted as well as the expected conclusions in the frame of the bachelor's diploma thesis. The phenomenon is introduced, and physical background is explained. The formulas for calculating the vulnerability of a ship to the occurrence of excessive accelerations are presented, as well as the set of data needed for their application.

This work is an introduction to a larger project. The research will be aiming at the examination how different ship characteristics, like main dimensions, will change ship's vulnerability to the above-mentioned phenomenon. For example: what effect does the height of the bridge above the deck have on excessive acceleration. Calculations will be carried out using a computer program designed for this purpose using appropriate algorithms developed by IMO. The Authors hope that their future research will prove beneficial to the International Maritime Organization and assist in refining new criteria.

Keywords: Excessive stability; Ship safety; Stability criteria; Excessive rolling.

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Operation Mode Simulation of the Marine Induction Machine

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Abstract

In this paper, we show you how the electric motor works and how it can be assembled in the "Inventor" application.

The electric motor is an electromechanical device that converts electrical energy into mechanical energy.

Basic elements for the proper functioning of various mechanisms, electric motors are essential parts used in a variety of fields. If the question arises which technology is more suitable for electric motors, alternating current or direct current, we must know that this depends on the type of application for which we need it, but also on costs.

Keywords: Motor work; Electronic motor; Simulation; Marine.

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Surf-riding as Intact Ship Stability Failure Mode - Bachelor Research Plan

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Abstract

Physical background of the current intact ship stability criteria contained in the 2008 International Code on Intact Stability has been criticized recently. International Maritime Organization (IMO) nearly finished the work on the development of a new set of criteria based on the state-of-art knowledge concerning ships' hydrodynamics, model tests and probability methods collected by the Member States and associated organizations (e.g. classification societies). In February 2020 the Sub-committee on Ship Design and Construction (SDC) published the draft Interim Guidelines on the Second Generation Intact Stability Criteria. The Guidelines are based on the stability failure concept. Surf-riding phenomenon is considered as one of possible stability failure modes in ship operation. Two-level criteria have been defined.

The paper proposed for this Conference aims at presentation of the research plan in the frame of the bachelor's thesis. Currently the research is on an early stage.

The background for the phenomenon that concerns ships sailing in the following sea may be explained as follows. If the wave parameters are such that the wave adds too much kinetic energy (steep waves) to ship motions that it cannot be dispersed by the difference between thrust and resistance, then surging motions are no longer possible and this excessive kinetic energy eventually leads to acceleration and to attraction the ship to the surf-riding equilibrium that is extremely dangerous for the ship and may lead to capsizing.

The core of the research is development a method that uses the same approach as has been used in the second level vulnerability criterion in the draft IMO Guidelines and might be applied in a ship-dependent Decision Support System for the Master for avoiding critical (dangerous) number of revolutions of the propulsor in a given sea state (wave height and period) and in a given loading condition of a ship sailing in the following sea.

Keywords: Ship safety; Stability criteria; Surf-riding; Broaching-to.

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Development of Ukraine's Maritime Potential on the Way to Eurointegration

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Abstract

The place and significance of the maritime potential for ensuring the socio-economic development of Ukraine have been clarified. The functional components of the marine potential of Ukraine are determined. The foreign experience of using the potential of the maritime industry is studied. The directions of development of the maritime potential of Ukraine in the conditions of cooperation with the countries of the European Union are offered.

Keywords: Potential; Maritime industry; European integration; Priorities; Development.

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Port of Constanta - Through Time and Towards the Future

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Abstract

This article aims to offer you better knowledge from a logistic point of view over one of the most important ports around the Black Sea, Port of Constanta. It is a multi-purpose port, therefore its throughput consists and varies from containers, agribulk and crude oil to iron ores, solid mineral fuels, oil products and chemical fertilizers. This aspect makes Port of Constanta a busy one, over 1.000 companies being active, nevertheless giving us the opportunity to analyse its traffic and conclude that comparing 2018`s data with 2019`s , the Romanian maritime traffic has increased over 8.36%. Using information that we gathered we could assume that this year`s transit will be around 68 million tons, a highly promising growth to Romanian economy.

Keywords: Logistics; SWOT analysis; Maritime, Containers.

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The Technical, Economic and Legal Issues Associated with the Implementation of the Concept of Unmanned Vessels in Maritime Transport

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Abstract

The paper presents a study of the main obstacles facing the industry. Throughout our paper, we will show that legal and technological changes are needed in order to make autonomous ships a successful project. The following risks were identified: route planning, safety, security, crew and passengers, cargo, technical issues, legislative issues. From a technical point of view, the development of a system that can follow COLREG is not complicated. However, the fact that this system will need to operate in an environment where there are both human and artificial intelligence operators makes the project a complicated one. Solutions to this problem have been sought for more than two decades, and many believe that it would be more efficient for ships to be monitored and navigated remotely, than creating a fully autonomous operation. The benefits of autonomous ships are undeniable. We would reduce transport costs, be able to sail at lower speeds and therefore reduce air pollution - a temporary solution to reducing greenhouse gases, but we must keep in mind that a malfunction or maybe even only a minor error of an insufficiently tested system can cause a natural disaster.

Keywords: Unmanned vessels; Technical, economic and legal issues.

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Shielding, the Main Method of Protection

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Abstract

This paper will revolve around the the role of armours on bord of military ships. I chose this topic because the strength of the materials is the basis of training engineers and is also very common among ships. Crew safety was and still is the first important factor on board a military ships. In the first part of this project we are going to talk about the design in ANSYS Student Software of different types of armor and their use in order to maintain the safety of the crew. In the second and last part, we are going to talk about the the results of the simulation of the impact between the projectile and different types of armours. This study will provide information necessary in finding better ways to defend military ships using armours.

Keywords: Armours, military ships, safety , crew, design in ANSYS Student Software.

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Assessing the Attractiveness of Black Sea Ports in Serving European Markets Using Containers via Inland Waterways

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Abstract

This paper is aimed at assessing the attractiveness of Black Sea Ports in further advancing European economies by shipping containers through inland waterways. This assessment is done in the form of a case study on the Rhine-Danube waterway which connects the North Sea with the Black Sea. The analysis is based on a researched literature review detailing the most recent, relevant information and statistics; and is therefore deductive in nature. The research upon which the assessment is based, was mostly completed within cross-sectional timeframes, with few studies being longitudinal in nature. The paper starts by explaining the importance of the Black Sea Container Market, thereafter, looking at the importance of the Black Sea for European trade. Then, challenges are identified in the realization of an efficient, viable inland waterway connection. Lastly, feedback is given on the latest progress to make the Rhine-Danube more conducive to sustainable container transport.

Keywords: Black Sea; Rhine-Danube; Container Freight.

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Maritime Technology Challenges: New Technologies And Opportunities

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Abstract

The future poses many challenges but also offers many new opportunities for prosperity of both the land and maritime sector. Today's challenges for the sustainable development of maritime transport include maintaining competitive in a global environment, optimal use of energy sources and minimizing its environmental impacts, particularly with regard to pollutants and greenhouse gas emissions. Prevention of Air Pollution from Ships (MARPOL; Annex VI) sets limits on Sulphur oxide and nitrogen oxide emissions from ship exhaust and prohibits deliberate emissions of ozone depleting substances; designated emission control areas set more stringent stands for Sox, NOx and particulate matter. This Annex covers mandatory technical and operational energy efficiency measures aimed at reducing greenhouses gas emissions from ships. Various inventions are based on this convention, Satisfying humanity's growing needs for food, energy, water, organic or mineral resources which presents another grand challenge.

Based on today's reality, there are attempts at new inventions. More vessels will offer superior energy efficiency through technologies for improving propulsive efficiency, smart and lightweight materials, and advanced hybrid power generation systems, with energy storage to optimize performance. Transformative technologies will improve commercial and operational performance of ship operation

Keywords: New challenges; Requirements; Offers; Transformative technologies; Zero emission-ships.

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Pollution of the Black Sea and Waste Management

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Abstract

In recent years chemical pollution has been identified as the most serious transboundary problem. Oil pollution threatens the Black Sea coastal ecosystems and the levels of pollution are unacceptable in many coastal areas and river mouths. Oil enters the marine environment as a result of operational or accidental discharges from vessels, as well as through insufficiently treated wastewaters from land based sources. Other toxic substances such as pesticides and heavy metals appear mostly as ‘hot spots’ near well identified sources. Heavy metals such as cadmium, copper, chromium and lead are usually associated with waste from the heavy industry and ash remaining from burning coal for generating electricity. Pesticides enter the sea mostly through rivers and streams due to agriculture.

Another major problem is the discharge of insufficiently treated sewage waters, which results in microbiological contamination and poses a threat to public health. Radioactive substances have been introduced to the Black Sea in small quantities from nuclear power plants and in more significant amounts after the nuclear power plant disaster in Chernobyl in 1986.

On average, some 85% of the litter found in the Black Sea is plastic. Of the most common types of litter that are brought into the Black Sea from rivers, around 20% are plastic bottles, while plastic bags and containers, two other key polluters, account for 10% and 9% respectively.

Keywords: chemical, pollution, transboundary, wastewaters, toxic, substances, pesticides, contamination, streams, nuclear.

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Technical and Economic Aspects of the Offshore Exploitation of Natural Gas in the Area of the Continental Shelf of the Black Sea

Author(s): Mihaela Mazilu¹⁷;
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Abstract

This paper includes technical and economic aspects of the offshore natural gas exploitation activity with an emphasis on the romanian Black Sea area. The paper begins with an overview of the global offshore sector. The year 2018 is analyzed according to the discovered oil and natural gas reserves and to the exploration of these resources. The same year is discussed from the perspective of natural gas production in main countries worldwide. Furthermore, the level of uncertainty of the producers in the offshore sector increases in 2020, an aspect further outlined in the paper. An overview of the offshore natural gas exploitation activity in the continental shelf of the Black Sea is made. It has significant volumes of oil and natural gas, and the surrounding countries are the major players in the development of this sector with important benefits in the economy of each contry. Further, the focus is on the romanian Black Sea area, especially on the benefits of developing the upstream natural gas industry in this region. In conclusion, the paper concludes with the importance of developing the offshore natural gas field for future investments with benefits in the economy of each country involved, but also worldwide.

Keywords: Offshore exploitation, continental shelf of the Black Sea, technical and economic aspects, natural gas.

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Risk Analysis Associated with the Arrival Maneuver for Cruise Ships

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Abstract

The paper aims to offer a comprehensive explanation through statistics and practical case studies with regards to the risks associated with cruise ship maneuvering in port, emphasizing on the arrival maneuver. Following the brief presentation of some basic elements meant to facilitate the understanding of the upcoming information, the discussion will revolve around accidents, life loss, human error, causes, prevention methods and how cruise ship safety levels fit in the context of global maritime transportation. As such, the contents will be based on risk analysis by means of statistics in terms of fatality frequency, accident frequency, accident causes, fatalities by accident type, an oil spill event tree for a cruise ship, general risk exposure for crew members and passengers and, last but not least, individual risk zones for port activities. The current state of this subject makes a statement regarding the cruise market evolution, future forecasts and how safety perception will be changed according to this.

The presented information is based on a 24-year period, from 1990 to 2014, and, to a lesser extent, until 2019. This happens because of the different degrees of data reliability. Furthermore, a different case study shows an evacuation model for a reference vessel, based on mathematical programming. The model is created in order to highlight the concept of safety and the importance of adequate evacuation. The final and most practically relevant part of this subject will be based around the particulars of an arrival maneuver, as per an actual event in which the paper's author took part. This is done through a comparative research that stands to show the importance of risk management when deciding to perform such a maneuver with strong wind conditions. In other words, the paper presents the methodology through different approaches that are meant to deepen the understanding and highlight relations governing the cruise transport risks.

Keywords: Cruise ship, risk analysis, ship maneuvering, safety levels, evacuation, port activities.

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The Analytical Review of “Navigation - Buoys , Marks and Beacons

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Abstract

The aim of my work is: to present the results of analysis dealing with the estimation of current condition of “Navigational buoys, Marks and Beacons”. Purpose-built Atons include lighthouses, beacons, leading (range) lines, buoys, day marks (day boards) and traffic signals. Visual marks are provided with a light or left unlit. The aids to navigation also perform the following navigational functions: marking a landfall position; marking an obstruction or a danger: indication of the lateral limits of a channel or navigable waterway;

Safe water marks show that there is navigable water all around the mark. For example, fairway, mid-channel or landfall mark. Safe water marks have red and white vertical stripes with a single red sphere as the top mark. At night, a single white light shows 1 long flash every 10 seconds. To remember safe water marks, think of 1 light with 1 long flash and 1 sphere for the top mark. Directional and sector lights -Directional and sector lights have a similar purpose to leading lights at channel entrances and inshore waters. Directional lights can be used as steering marks and sector lights display a light of different colors (usually green, white and red).

Port traffic signal lights - others in the area that large commercial ships are moving in the port, harbor , marine or other confined waterway. Leads - When the leads are in line, you are travelling in the middle of the channel. Where leads are used to mark the middle of larger shipping channels small vessels should travel on the starboard side of the channel to keep clear of large ships. Blue middle channel mark - Blue middle channel marks are fixed blue lights that mark the middle of the channel for vessels passing under a bridge.

Keywords: Buoys, Marks, Beacons, lights.

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The Analysis of Port Technologies Used in the Container Terminal

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Abstract

This paper highlights port operating technologies in container terminals and the various new conceptual handling systems that have been proposed in recent decades. The basic ideas behind previous improvements in equipment and operations are analysed to identify future directions that can be used to develop new ways of port system utilisation. The paper analyses the improvements made to achieve higher productivity in container operating systems (example: integration of containers in the warehouse; loading / unloading; port distribution, etc.). The new large container terminals being under construction, the ones already being designed and the future ones are ambitious projects will challenge the terminal operators to further increase the efficiency and performance of various processes. However, the right selection of a modern operating system is a key factor to a successful terminal.

Keywords: Container terminal, port technologies, innovation.

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World Maritime Trade and Future of Shipping

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Abstract

Maritime transport is an essential to the world's economy as over 90% of the world's trade is carried by sea and it is, by far, the most cost-effective way to move goods and raw materials around the world.

Maritime activity has a key role to play in the alleviation of extreme poverty and hunger as it already provides an important source of income and employment for many developing countries, such as the supply of seagoing personnel and ship recycling, shipowning and operating, shipbuilding and repair and port services, among others.

Keywords: Maritime Transport; Maritime Trade; Shipping; Future of Ships;

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An Overview on Ship Crew Changes during COVID-19 Pandemic

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University of Montenegro (Montenegro)

Abstract

As global lockdown and port restrictions have led to contract extension for many seafarers in the world, the issue of crew changes has been at the center of attention lately. Maritime organizations and employers have issued a joint statement calling on governments to define seafarers as keyworkers during the current global coronavirus pandemic. This was in order to ensure that they are exempt from the normal travel restrictions so that crew changes can take place. The statement was followed by International Maritime Organization's (IMO) recommendations for ensuring safe travel for seafarers worldwide.

The paper provides an overview on ship crew changes guided by IMO protocols, as well as information concerning which countries enable stated activities.

Keywords: Seafarers, crew, crew changes, IMO protocols.

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The Impact of Maritime Transport on the Environment and Its Consequences

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Abstract

Today, international trade and shipment is an important component of development of the global economy, and this process is driven by means of transportation, ensuring cargo transportation from its place of origin to its place of destination. In the modern world, all types of transport (air, sea, land) are used as carriers but the largest share accounts for maritime transport as to its usage. According to international maritime reports, 90% of cargo transported throughout the world is provided by maritime transport.

As any business, sea shipping has its environmental impact too. This article describes and analyzes environmental impact indicators of maritime transport and its outcomes.

Key words: Maritime transport; Environment; International Maritime Organization (IMO); Sustainable Development Goals (SDGs).

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The Impact of COVID 19 on Maritime Tourism: Challenges and Recommendations for Montenegro

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University of Montenegro (Montenegro)

Abstract

The global Coronavirus pandemic, in addition to the negative consequences for the health of the population, hurts the global economy. Maritime tourism is a multidisciplinary activity, which in recent years has been permanently achieving a growth rate, in this new situation and given the nature of business will suffer certain losses.

The purpose of this paper is to assess the impact of COVID 19 on maritime tourism in Montenegro and to point out the challenges and changes in the business that will be faced by all actors in this sector after the epidemic (future travel behavior, operational challenges, provision of services, etc). The study considers the dominant sectors of maritime tourism: cruising and yachting. Following the gradual abolition of restrictive measures by regulatory authorities, based on a review of secondary data, this paper provides recommendations for the process of recovery of maritime tourism and a more successful reopening of nautical tourism ports in Montenegro.

Keywords: COVID 19, cruising, marinas, Montenegro.

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Georgian Ports - Their Role During the Global Pandemic (COVID-19) Period

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Abstract

The pandemic caused by COVID-19 has become a test for Georgia and the world in general, given that the pandemic has had a profound effect on almost every area that has acquired a particular scale and completely changed the daily rhythm of our lives. Georgian ports are the most important logistic gate, which provide the region with a connection to the global trade network even in times of crisis. Under quarantine conditions, Georgian ports were working 24/7 hours. Cargo operations were carried out smoothly. The following measures were taken to prevent the virus: Disinfection of cargo and vehicles is carried out if necessary, Foreign citizens are restricted from crossing the border, Land connections are restricted and persons on board the ship are subject to thermos screening if the ship and crew member (s) or passengers have been in high-risk countries for the past 21 days. On April 4, 63,000 kg of food and medicine arrived in the port of Batumi by two ships. 40,000 kg of food was loaded on one ship and 23,000 kg of food and medicine on the other ship. The ports of Georgia have been provided with safe and timely entry and exit of ships. In addition to ground checkpoints, Georgia provides the main demand for goods through seaports.

According to the government, the rules for ships entering Georgian ports have been tightened since March to prevent the spread of coronavirus. Entry is allowed only after passing the thermoscreening. Disinfection of cargo and vehicles is also carried out. Cargo turnover at Batumi port has increased. "The cargo entering the port of Batumi in March 2020 has increased by 150% compared to the same period in 2019, containers - by 50%, and the general cargo - by 52%," – information by government.

Keywords: Georgian Sea Ports, Cargo Turnover, Ships Traffic, Covid-19.

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The Importance of the Maritime Sphere and the Deep Sea Port of Anaklia

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Abstract

The role, importance and power of sea transportation in the formation of international trade and in the perspective of economic development of particular countries as well as regions is the subject of continuous research, and the aim of our topic is to introduce a small part of the previously obtained knowledge on the basis of given statistics and information. The report discusses Georgia's potential role in the maritime affairs. Also, state our views on the importance of maritime infrastructure development in our country's economy, the role of state policy and the right or wrong steps taken by governments, using Anaklia port as an example, which is still the subject of political speculation.

Keywords: Transport; shipping; port; maritime infrastructure.

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Leader Shipping Companies in the World Container Market

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Abstract

The World Ocean, covering $\frac{3}{4}$ part of the earth's surface, is the most important transportation artery, through which the major part of cargo is transported in all countries worldwide. Container shipments occupy the important place in cargo transportation.

Worldwide, the volume of container shipments is growing from year to year. The topic discusses the leading shipping companies currently operating in the world container shipping market: 1. APM-Maersk, 2. Mediterranean Shipping Company S.A.(MSC); 3.CMA CGM Group, 4.China Ocean Shipping (Group) Company (COSCO), 5. Evergreen Marine, 6. Hapag Lloyd, 7. Hamburg Süd Group. 8. Hanjin Shipping, 9. Orient Overseas Container Line (OOCL), 10. United Arab Shipping Company (UASC).

There is represented detailed information about the date of establishment of each company, location of the head office, property, number of employees, financial activities, etc.

Keywords: World trade, container, container shipments, shipping company, leader company.

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Market Introducing of the VIQ into Educational Program

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Abstract

VIQ – vessels inspection questionnaires predict SIRE program requirements for a particular type of vessels and serves as a guideline for inspectors and ships operators as well. SIRE (Ship Inspection Report) program established by OCIMF (Oil Companies International Marine Forum) form a critical part of the “Risk Assessment”, that any oil major / shipper/ receiver carries out to gauge the business viability of the vessel. In nowadays OCIMF sets a trend for the best management practice in the tanker industry and implementing latest industry regulations. As it became so necessary part of the business, oil majors and crewing companies are concerned about well qualified and competent seagoing staff. Also this cause concern among seafarers, who wish to achieve success in their career. Matter is that, from the beginning future seafarer has a long way which begins in educational institution and there, it is impossible to cover every aspect, what they will have to face in practice. The main idea of introducing of the VIQ into the educational program is to cover as many aspects as possible in order to enhance the practical and theoretical knowledge and competence of our seafarers, who will represent us on the international market, which will lead to an increase in demand, all over the world.

Keywords: VIQ, SIRE, Vetting, Education.

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Emission and Spread of Dangerous Substances in Port Territory

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Abstract

In the light of globalization and the ever increasing demand for mineral resources, the maritime industry has witnessed substantial development. This development is directly related to the need to expand merchant fleets and the need to build more sea and inland ports. The wide spectrum of transported commodities has led to the modification of transport legislations and the requirements of storage for dangerous substances. In order to protect our environment from the effects of such an unprecedented industrial development, many actions and efforts are put into place to improve the quality of air, water and soil. However, the transport and storage of dangerous substances and commodities has an inherent risk of leakage or release of these harmful substances to the environment. For this reason it is important during the planning and building phase of ports to take into account the nature of the commodities to be transported and eventually stored for a certain time in the port territory. This article takes up the subject of forecasting and analyzing the release of dangerous substances in port territory, as a result of improper storage of chemical substances. Such an analysis is necessary to be able to elaborate instructions and procedures in the case of release of such harmful chemicals. This article presents the analysis of the release and spread of sulfur oxides as a result of self-ignition of stored sulfur in open port territory. This article shows the complexity of the sulfur oxides spreading process, due to various weather conditions such as: wind speed, the stability of atmospheric conditions and temperature. The analysis has been conducted based on DNV Past ver.7.11. software.

Keywords: Sulfur oxide emission, analysis of danger zones, Phast, uncontrolled release of toxic substances.

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Scrum Agile, a New Trend in Logistics: Challenges and Opportunities

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Abstract

Scrum is one of the most innovative, revolutionary approaches in a modern business, in the era of technological advances, it is a subset of Agile approach that helps to create a better business value in a minimal time frame. Its importance has increased day by day and finally has been formed as a strategic tool for the company's development. The approach is successfully applied by the world's giant organizations such as Amazon, Microsoft, IBM, Google, Netflix, Facebook and many others, while in the case of small companies, the managers try to transfer to Scrum for the purpose of escaping from outdated approaches, as a result they follow the Scrum concept unconsciously and the outcomes received are not much promising. In the case of Georgia, Scrum Agile still remains to be a new concept and untapped by Georgian companies. A shift toward an agile approach is the first step toward sustainability and the Scrum Agile is a requirement for the future. Those organizations that do not adopt some form of agile will not be responsive to customer and market needs and are significantly disadvantaged. Thus, Georgian experience has defined the direction of the present paper. The aim of the study is to outline value of the Scrum Agile concept, determine the challenges and opportunities brought by the Agile transformation, develop practical recommendations for Georgian companies based on the foreign experience in order to help them in catching up with the pace of change.

Keywords: Scrum, Agile, Agile transformation, Sustainability.

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Introduction of Blockchain Technology into Logistics Activity of The Enterprise

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Abstract

Logistics involves planning, organizing and controlling the movement of material and information flows in space and time on the way from the primary source of raw materials, in-house processing to the manufacture of finished products and bringing it to the consumer.

The main purpose of logistics is to effectively regulate and control material and information flows, which ensure high quality supply of raw materials and finished products.

Irrational use of the existing potential of regional development, inefficient specialization of regions, the lack of a balanced mechanism for managing economic flows requires the introduction of new approaches to managing the economy of the regions on the basis of logistics. Execution of the integration function by logistics, which covers all aspects of optimization of economic flows at the micro-regional and interregional levels, leads to the formation of regional logistics systems (RLS) to ensure sustainable and competitive development of regions.

The article reveals the effectiveness of the introduction of digital technologies in the logistics activities of the enterprise. An example of application of Blockchain technology at the enterprise and the main tasks facing the introduction of technologies in the logistics activities of the enterprise are given.

Keywords: Logistics activity, digital technologies, Blockchain, digitalization, digital platforms.

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Developing Door to Door Maritime Logistics as a Competitive Strategy for Liner Shipping Companies

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Abstract

Background: This study will assess whether liner shipping companies should look into developing business models that are centred around creating a complete supply chain service that runs from end to end (customer-to-customer). This approach is formally known to the industry as “vertical integration” and includes all aspects of end-to-end services. This will be expanded on in the text to follow.

Aims: The purpose of this research would be to determine if major liner shipping companies should invest in end to end maritime logistics (transfer, road and rail, port integration and final delivery services) with the aim of creating a complete transport service for their clients. The research will involve a review of empirical studies to determine if the business model will lead to a larger client base, which in turn will decrease unit costs for liner shipping companies by guaranteeing more load on their ships. The legislative requirements will also be considered for such a strategic alliance, in the case of South Africa. Furthermore, the article will investigate the impact that an end-to-end maritime logistics service will have on the liner market and if it creates a competition imbalance as well as the impact the service will have on the economy as a whole.

Method(s): The plan will be to interview customers that segment their supply chain approach via dealing with different companies along their supply chain as well as customers that use companies that offer a comprehensive end-to-end service. Liner transport companies will be interviewed as well. In addition to the interviews, the study will attempt to determine the savings liner shipping companies can expect to experience by increasing the ships utilization. However given the current global state of affairs with Covid-19, the aim of the study will be achieved by diving into literature and data to create a more complete approach towards offering

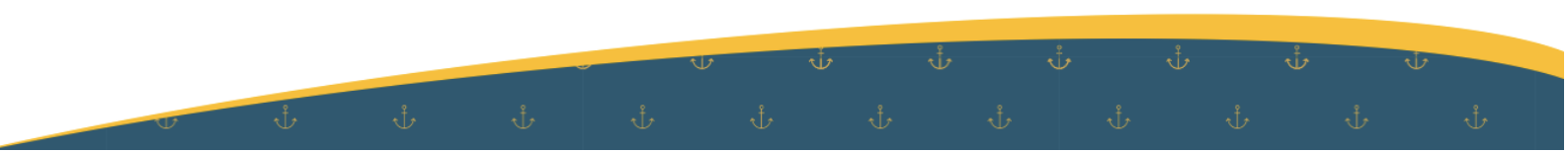
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door-to-door maritime logistics. Companies should be able to read the research conducted and have a general idea of what the offerings would be to them and whether it is feasible.

Results: The expected main findings of the research are that liner shipping companies should invest capital into opening up an on-land freight service to improve their competitive advantage and gain more market share. Alternatively, liner shipping companies should look into developing strategic alliances in order to provide the service. A further expected result is for liner shipping companies to take additional steps to becoming more efficient, this can be achieved through taking a more active role in ports with the aspiration of increasing throughput.

Conclusions: The most important by-product of this study will be companies creating business models to finance the expansion or potentially mergers. This is done in order to create a more stable future business environment for themselves (the liner shipping company) by getting an edge over their competitors due to them offering convenience via a basic end-to-end service that can be improved in the future (by offering comprehensive services for customers).

Keywords: Freight transport, shipping lines, vertical integration, maritime logistics.



Organizational and Economic Mechanisms of Transport System Development on the Basis of Logistics

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Abstract

The article examines and systematizes the organizational and economic mechanisms for ensuring the effective development of national transport and logistics systems. Among them the following are identified as priorities: development of public-private partnership and decentralization reform, formation of integration multisectoral structures, intensification of integration processes of the transport and logistics system in the international transport network.

Keywords: Transport and logistics system, public and private partnership, clusters, logistics and outsourcing platform.

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Digital Evolution of Cyber Security in Modern Shipping

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Abstract

Today digital technologies are engaged in Maritime Industry deeper in comparison with the gap of the last 10-20 years. Nowadays seafarers more rely on GPS, ECDIS, AIS, ARPA and that is normal to obtain benefits from modern equipment, designed to facilitate the work and improve the safety of life and shipping. As quantity of cargo transported by sea has greatly increased, various cargo programs are established on board of tankers, container vessels, bulk carriers, because it takes time to stow around 14000 containers on board when the time is expensive in today's circumstances. Thus, on the one hand electronic equipment and IT has played a great part in shipping, but, on the other hand, such way opens a wide potential risk of cyber-attacks, potential threats and, as a result, damage. Trojans, viruses, password stealers, leak of data, breach of security may cause a great damage to Companies. We are in the beginning of new era, where autonomous vessels will take place and as the time goes on, IT and OT will become more welcomed, hence, the possible danger will rise only.

Examples of poor cyber-security culture, that led to an vast losses:

- 1) In 2014, hardware such as barcode scanners has been used as hacking devices: This cyber-attack mechanism was hidden within a piece of equipment. When the scanner was plugged into the computer, it launched a series of automated attacks trying to get access to the financial server.
- 2) In February 2016, a shipping company reported a successful cyber-attack:

One of their vessels had been infected via an email attachment. The ransomware encrypted all files on the ship's computers. To get the computers working again, the hackers asked for money transfer by Western Union.

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- 3) In June 2016 an Electronic Chart Display and Information System (ECDIS) was infected with malware. The crew used an infected personal USB stick for the routine update of the charts. The ship was left without usable charts.

However, there are methods for training and protection of crew in these days directed to prevent such damages by applying correct practice. Such practice includes training of crew how handle modern equipment, certification etc. To avoid losses seafarers require training to operate the technologies found on modern vessels and we will consider the most common practices for loss prevention.

Keywords: Cyber security, autonomous shipping, digital evolution, ship, threats, traps, navigation, equipment, virus, anti-virus, education, training, IT, OT.



Risk Management in the Supply Chain

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Abstract

In today's world, where globalization is rampant, every nation's economic growth is directly associated with effective logistic and supply chain processes. In order to maintain the competitiveness of companies in the modern market economy, great importance is attached to optimizing logistics processes and minimizing the costs incurred in the supply chain. One of the challenges of the world economy is the development of an effective and uninterrupted supply chain. Therefore, it is important to organize the delivery network in such a way that the supply chain meets all the international standards and conditions required for the delivery of goods. Recent periods, such as the spread of viral infections, natural disasters, or other force majeure situations, have led to some delays in the supply and delivery chain, and in some cases to a complete cessation of production for some time. As a result of these developments, many companies have begun to implement risk management to avoid delays in the delivery network and to maintain a market position in the long run.

The work discusses the different risks posed in the supply chain, the causes of their occurrence, and the mechanisms of management. For example, the force majeure situation is discussed, in particular the impact of the COVID 19 pandemic on the supply chain.

Keywords: Supply Chain Management, Risk Management, Customer, Impact of COVID 19 on supply chain.

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Impact of the Corona Virus on Logistics and Supply Chain

Ways to Solve the Problems Caused by the Crisis

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Abstract

COVID-19 caused major changes in the supply chain for medical, food and other household products. The announcement of pandemic and spread of the virus posed new challenges to the whole world, with almost every company facing a financial crisis. Existing reality caused delays in cargo movement during crossing of the borders, as disinfection of cargo and vehicles and continuous checking of staff became necessary. Enforcement of these and other state regulations takes quite a long time, as a result of which the cargo cannot reach its destination on time. Also a problem is quarantine, as a result of which almost all companies suffer from staff shortages. Along with this situation, the demand for some products has increased.

Due to the crisis caused by the virus, the standardized supply chain system introduced in Georgia and around the world has faced challenges, problems have arisen in various areas of cargo turnover.

In our study, we will discuss in detail the impact of the Corona virus on the health care system and also on the food supply, what possible adaptation methods have been developed in Georgia and what potential it may have in the post-crisis period in Georgia.

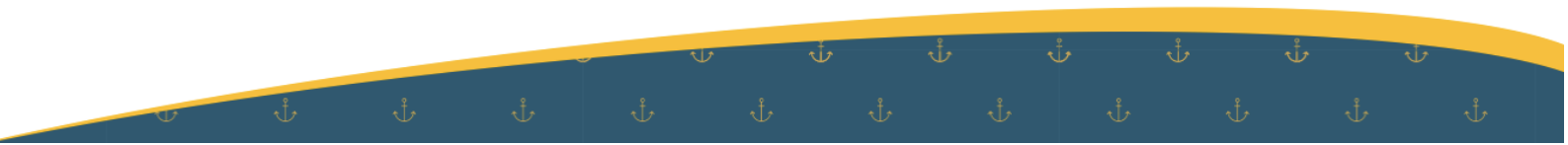
Research, articles, assessments and assumptions of experts and various world organizations in the field of logistics and crisis management about the development of a possible scenario were used in this study. Statistic data on food and medical sector were also processed as supporting materials and for the purpose of detailed discussion of the situation and 2020 was compared to the previous years.

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As a result, it was concluded that in addition to the development of operational methods, it is necessary to draw up a strategic plan in the future, through which we will be ready to overcome various unforeseen delays and reveal the full potential of Georgia, which will be facilitated by its own production, geographical location and improvement of online methods.

Keywords: Supply chain, pandemic, Covid19, food supply, health care system, medicine, regulations, crisis management, health care, Georgia



The Importance of Maritime Logistics in International Trade

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Abstract

Maritime logistics plays crucial role in globalized world considering that no nation can rely fully on what it produces domestically. Most countries are involved in international trade, everything from raw materials like crude oil to clothes and food are transported by the sea. For international trade purposes maritime transport industry is very important as most of the traded cargo up to 90% is shipped by the sea.

One of the key areas of concern for this industry is efficient logistic management especially of the container ships so it becomes cost-effective and enhances the performance of the shipping company.

Maritime logistics industry is quite complicated and has a long supply chain, cargo owner can ship goods on its own however latest trend in maritime industry is outsourcing of logistics to the logistics service providers also known as third parties (3PL) service companies who assist an organization in ensuring effective management of their logistics function.

Keywords: Maritime, logistics, third parties, cargo, international trade.

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Impact of Cargo Reloading Process on the Cost of Services in the Logistics Chain of Product Delivery to Customers

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Abstract

Costs for cargo transportation include all the constituent costs associated with attracting cargo to the elementary logistics activity. Shipping costs are indicator of the quality of transport work. To calculate it, all costs related to the shipment of goods during the specified period of time must be equal to the amount of transport work performed during the same period of time. The sum of all costs associated with the performance of cargo shipments can be divided into variable, constant, load-unloading, and road costs. The costs of loading and unloading (Cargo reloading) include the costs associated with the performance of these works. (Maintenance of service personnel of loading workers and loading-unloading mechanisms, cost of energy, oil and other equipment required for operation, costs of maintenance and repair, depreciation and Etc.) These costs are calculated based on the weight of the shipment or for loading and unloading works per unit time required. For logistics service delivery of products also necessary to perform such ancillary operations, Such as delivering rolling stock to load, cargo loading and unloading and etc. All of these auxiliary operations require a certain amount of time, Which part of the shipping process may change depending on the shipping conditions within a fairly large range. The paper is researched influence of technical equipment and level of organization of the logistics process of cargo reloading on the time of delivery, average speed of cargo and on production. A specific generalized example evaluates the share of the loading process in the total logistics costs of cargo transportation.

Keywords: Supply chain, production, Loading and unloading, Production, Logistic costs.

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Business Management in a Time of Crisis

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Abstract

This paper will revolve around the current situation that businesses are facing due to the COVID-19 outbreak. Firstly, we are going to take a brief look at the history of trading and business evolution. You will see an insight into four different businesses, how the crisis affected them and how they plan to overcome these difficult times. We will discuss the future paths that our economy might evolve on and what measures should be taken in order to preserve and re-establish the economy to its former level. We will rejoice ourselves with a few fun facts. As a personal conclusion I am certain that we possess the power to create better and more prosperous businesses based on the new skills we acquire.

Keywords: Business management, crisis, recovery, future way of doing business.

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Investment Priorities of Ukrainian Production Cooperation with Eu-Countries

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Abstract

The tendencies of cooperation of Ukraine with the countries of the European Union are investigated. The main preconditions in the context of implementation for cooperation in the production sphere are highlighted. The foreign experience of attracting foreign investors in innovative activities is studied. A set of necessary measures for the implementation of investment priorities of industrial cooperation with EU countries is proposed, which includes measures of scientific and technological, economic, legal, socio-political nature.

Keywords: Investments, cooperation, production sphere, support, innovative activity.

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The Challenges of Online Education During the COVID-19 Outbreak: Attitudes of Students from Montenegro

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Abstract

The current situation with the Covid19 virus has abruptly changed the way of traditional education and has replaced it with online one. The development of technology has influenced the modernization of education both in the World and in Montenegro as well. In this research, the focus is on the challenges of online education from the students' perspectives. A survey used in the paper was based on the opinions and viewpoints of 180 students. The respondents are students from the University of Montenegro. Based on the results of the research, it is clear that students prefer the traditional way of education. Online education still struggles with technical problems, as well as introverted student behavior that sometimes makes it so difficult. This research aims to help understand the situation about online lectures and in what direction this type of education can go in the future.

Keywords: Online education, students, Covid19, Montenegro.

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War Photographers - Story Tellers Through Pictures

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Abstract

The paper aims at presenting the brief history of war captured in frames and then transposed into weapons that pull the trigger of emotions. These powerful figures are not just men, but also strong women who had the courage to step into the field bare-handed using their camera both as a weapon and a memory collector. Thus, they become history tellers because every single photography has its own story to tell, with a huge impact on the human eye. Details regarding the life story of two of the most well-known war photographers, and also a short description of their art will be given, taking a short journey back in time.

Keywords: War photographers, photographic art, impact on society, inspiring stories.

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Globalization and the National Phenomenon of Culture

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Abstract

The paper discusses how globalization has transcended economic boundaries and covered almost every area of human achievement, including culture. Our generation lives in a new historical reality based on the largest technical base with a universal communication system. Thus, the subject of our interest is not only to study and determine what globalization is, what is a national phenomenon, national identity, and so on.

Clearly, the role of individual states in the global international system is somewhat diminished, but in fact, it is inconceivable that there is a separate, isolated country in today's world. Small countries face particular difficulties because they have to maintain their own identity and cultural traditions and establish a proper place in the international system.

As we can see, a golden interval is needed for our country to create a Georgian state based on modern technologies and achievements based on its traditions.

Keywords: Globalization, National Phenomenon, Culture Identity.

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Conflicts in Interpersonal Communication

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Abstract

One of the areas of special interest in the modern civilized world is interpersonal communication and its various aspects. Along with important components of communication such as, multicultural environment, age, gender and professional characteristics, etc., the issues, related to the conflict, their management and regulation are also very important.

In this paper, we have tried to briefly discuss the essence of the conflict, the stereotypes related to the conflicts and their resolution, their validity; Based on various sources, we have presented the main, universally accepted ways of resolution of conflicts.

According to sociological and socio-psychological studies, human behavior is determined by two main factors. The first one is value orientations, internal programs of an individual and behavioral stereotypes, and the second is the peculiarities of the created situation. Hence, in during study of the nature of conflicts and their conditioning factors, special attention should be paid to personal factors, because it is the individual who chooses and defines the initial behavior that determines the nature of further relationships.

The basic model of behavior, usage of which is recommended to avoid conflict situations is **assertiveness** - the ability to express own desires, feelings, needs and protect own rights in such a way as to consider the feelings of others and not infringe their rights.

Conflict exists wherever there is some kind of interpersonal relationship, therefore it is near-impossible to completely insure oneself from it. And when, in spite of all efforts, it emerges, our main goal should be selection of right way of its regulation and conversion of results of the conflict into a positive experience.

Keywords: Interpersonal communication, conflict, conflict regulation, assertiveness.

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The Role of Gestures in Intercultural Communication

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Abstract

Communication is a dynamic process. It changes, moves and develops all the time. Communication is interpretive in nature and people actively attempt to understand and organize their experiences in the world.

Different gestures have different meanings. Different nationalities have specific gestures and emotions. However, due to the different background and culture, even the same gesture and emotion has different meaning for different people in certain contexts. Thus, it is very useful for us to understand people by understanding their basic nonverbal communicative skills.

Every culture has different types of values, beliefs, customs, norms and taboos. We have to respect them and respect them for what they are and who they are. When going to other part of the world and meeting people or when they come to our part of the world and we greet them it is very important to put ourselves in their shoes and not judge their traditions, values and ways of communication.

Keywords: Verbal, nonverbal communication, cultural differences, gestures, intercultural communication.

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Environmental problems on the Black Sea coast of Poti

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Abstract

Rioni River and alluvium deposited into the sea by it play a crucial role in the formation of the Black Sea coastal city of Poti, volume of which has changed significantly over the past century as a result of hydro-constructions carried out on Rioni River and various anthropogenic interventions in its run-of-river processes.

Diversion of Rioni River to north of the port has created irreparable problems directly for Poti port as north-western storms and southward sea currents caused alleviation of port entrance channel and inner harbor of the port itself by Rioni river alluvium and endangered navigation. Due to this, the port administration spends hundreds of thousands of dollars every year for systematic cleaning and deepening of the bed of port entrance channel and inner harbor. Strong storms of 2012-2018 and coastal currents at the confluence of Rioni River “City Canal” caused intense shore cutting and during recent 5-6 years the coast has receded 70-80 meters back.

The paper discusses the environmental and geomorphological problems existing in the Black Sea city of Poti. It is represented that these problems are mainly caused by hydraulic engineering constructions designed and implemented unsuccessfully for various purposes. The unresolved nature of these problems hinders the safe operation of the port and the timely delivery of cargo. A situational map of the problems is given.

It is represented that although these problems have been present for many years, it can be said that the issue related to the final solving of these problems remains extremely relevant to this day.

Keywords: Black Sea, coastal line, environmental protection, geomorphological processes, shore cutting.

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The Importance of Smart Transport in the 21st Century

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Abstract

In the 21st century, any interaction with the external world and each other has become digital and countable. Analysis of this data, makes communication with our external world better. This task is especially relevant in modern cities, because of density of population and concentration of economy, people have a huge impact on each other's everyday life. The "smartness" of cities is on the agenda of today's world. Various functions and areas of the **Smart City** are being improved through modern technology, resulting in significant savings in resources, time and finances.

The critical component of Smart City is **smart transport**, which is focused on creation and introduction of technologies that collect and analyze data to improve the city's transportation system. The result is an environmentally friendly **smart transport** that is integrated into a single "neuron network" for the purpose of improvement of public life, access to information and provision of comfort.

Keywords: Smart transport, digital data analysis, automated systems, Smart City, transportation system.

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Smart City and Smart Community

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Abstract

"Smart City" is a city based on "smart" technologies. The "Smart City" is polarized toward improving the quality of life of its residents, which means sustainable economic, social and environmental development. However, technology alone does not determine the success of a smart city. Its residents make a great contribution to the "smartness" of the city. The city should take care of raising public awareness and, conversely, the public should be interested in and have desire to be actively involved in the city's progress / development. Accordingly, human capital (high level and quality schools and universities; education / development and attraction of "brains"), international liaisons, smart transport, smart energy, smart urban planning, mobility, ecology etc. are the most important for "Smart City".

The report discusses the need for two-way communication between the Smart City and the smart society, symbiosis of which is the cornerstone of the country's development.

Keywords: Smart City, smart society, smart technology, automated systems, smart transport, smart energetics, smart urban planning, ecology.

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Prospective Methods of Packing Food

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Abstract

In the process of transportation and storage, it is important to fully maintain the product features of the cargo. Therefore, in recent years, much attention is paid to the form of cargo presentation in order to maintain the quality of cargo and reduce losses.

The article discusses the following key areas of improvement of current modern technologies, materials and packaging methods: aseptic packaging; vacuum packaging; packing in a gas-filled area; active packaging; use of new packaging materials.

Keywords: Transportation, quality, packing, packaging methods, aseptic packaging, vacuum packaging, active packaging.

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Economic Crises Caused by COVID 19 and Analysis of Georgia's New Action Plan

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Abstract

The changes caused by the pandemic face the whole world with a new reality. Along with millions of infected and thousands of died around the world, COVID 19 has caused huge economic damage but now is not the time to back down. Rather, each country is thinking about how to deal with this challenge. We think that the trade war between the United States and China will be the beginning of a new era for many developing countries.

Our conference theme will be focused on the current challenges in the economy and Georgia's role in these challenges. We think that our country has the potential to demonstrate its advantages to many American or European companies that left Chinese market, and gain huge economic benefits as a result.

The aim of the study is to identify each of the positive aspects that grant a privileged position to Georgia compared to other interested countries.

Key words: Work force, unemployment level, economic benefit, investment, pandemic.

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Waste Management

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Abstract

The root of all environmental problems comes after meeting our needs. The issue of waste management is a global environmental, social and economic problem in the world.

The term “waste management” originated in the 20th century and was identified with disciplines such as sanitary engineering and environmental engineering.

Sustainable waste management is a defined practice of resource renewal and reuse that focuses on reducing the amount of natural resource consumption.

In EU 6th Environmental Action Plan, waste prevention and management is identified as one of the top 4 priorities (reduction, reuse, recycling, recovery). Various regulatory and incentive policy instruments are used in European countries to implement waste legislation and the principle of waste hierarchy.

In the modern world, the main challenge of waste modernization is the "circular economy", which needs a huge cultural shift to achieve the scales of the industrial revolution.

In order to create a system of waste management standards in Georgia, it is important to modernize the private and government sectors, to develop sustainably, to raise the level of awareness in the society and provide growth of inclusive economy.

Keywords: Waste, sustainable management, waste hierarchy, circular economy.

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The Level of Development of Organizational Culture in Local Companies

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Abstract

The centuries-old existence of business in the global market has provided a multiple-aspect refinement and development of organizational sector. Initially, the main task of the business was to gain maximum profit, and the ways to achieve the goal were mostly arbitrary. History shows that consideration of other factors is also essential for business success, and one of the key factors is the level of development of organizational culture. By the XXI century, it was recognized that the cultural climate in the organization has significant influence over the final outcome of the business. Therefore, examination, improvement and application of organizational culture models became actual. The models showed importance of the staff employed in the company, represented as a powerful social tool, their interdependence, attitude towards the goal of the organization and the definition of ways of achievement of this goal.

The level of development of organizational culture is different in various parts of the world. Some states were the first in learning and usage of goal-oriented organizational culture, some states are now in the process of study and try to adapt it to the reality of their business environment, and in many places, unfortunately, it is still being formed spontaneously.

This article discusses the current circumstances and problems. It analyzes level of development of organizational culture in local Georgian companies, and discusses aspects of development of organizational culture and results obtained through the level of its development. That's a fact that the organizational culture sector managed to prove its necessity and power in the field of business. The main controlling and governing body of this power is the social instrument.

The article is focused on the shortcomings of organizational culture development factors in local companies, the arbitrariness and control of its formation, which is provided by its governing body - the social instrument.

Keywords: Organizational culture, organizational culture models, cultural climate, social instrument.

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Decision-Making Information Support System in the Management of Logistics Processes

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Abstract

Enterprise Resource Planning System (ERP) is an integral part of modern business operations that assists company managers in making optimal decisions in real time. The logistics processes of each company require organization, management and control, which is related to making a number of decisions. Globalization has led to the connection of both local and international markets, which in turn has led to a complex representation of the organization's activities. Access to shared data and their aggregation has become problematic. Incomplete automation hinders the development of company, deprive management of the opportunity to see the full picture of the business and make appropriate decisions based on it, which often leads to the bankruptcy of the company.

To ensure system integrity, the offers on the market allow organizations to more easily and efficiently analyze data, manage existing processes and find optimal solutions. The introduction of the ERP system is a multi-step process and requires participation of both the company's employees and the consulting firm. Involvement of support group in the implementation of the project ensures quality control of the decision to be made, retraining of employees and completion of the project within the set timeframe. Also, the current situation of the company (As / is analysis) should be assessed in advance, problematic issues and main requirements should be identified. Hence, introduction of this multifunctional program is associated with quite a lot of time and expenses. Therefore, priorities need to be re-evaluated to see if such system will be beneficial. The new system will help the company to make strategic decisions quickly and manage organizational processes efficiently. An integrated solution will increase business transparency, process efficiency and asset management to achieve the set goals.

Keywords: ERP, As/is analysis, automation of processes, integrated solution, database, management.

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Ensuring the Protection of Personal Data during Police Activities

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Abstract

Recently, issues regarding personal data are especially relevant in the field of human rights protection. With the development of information technology, threats of illegal processing of personal data are also increasing.

Privacy right is recognized as one of the most important and fundamental rights, protection of which is the obligation of every state. Georgian legislation also focuses on the special importance of protection of this right.

Due to the urgency of the issue and great public interest, it is very interesting to ensure protection of personal data during implementation of police operations.

This topic about protection of personal data in the police sector. The aim of the topic of the paper to be discussed is to review challenges of personal data processing within the framework of police measures, to determine legal norms that provide legal processing of personal data within the framework of police activities, and at the same time to review the principles and foundations of personal data processing, as well as individual regulations and supervisory instruments.

The object of the research is the practice established in the process of processing personal data during the implementation of police operations and the assessment of its legitimacy.

The task of the research is to evaluate existing problems in the field of personal data protection, the existing news.

Keywords: Personal data, special category data, processing principles, police operations.

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Law and Reality in the General Education System of Georgia

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Abstract

The main foundation of any successful and strong state is an enlightened society. The state is strong if it has non-discriminatory law and its effective implementation mechanisms that guarantee the successful future and progress of young people in the field of education. 2 legal instruments are reviewed in this article:

“The Law on General Education”, and “Code of professional conduct of teacher” and validity/non-validity of their enforcement is confirmed by the study. The aim of the study is to identify how the existing legislation is being implemented in schools and how students feel about all of this. The aim of the study is to examine legal framework and understanding of regulations effective in this field. Georgian legislation allows for the existence of an educational space of the liberal-democratic standard, but on the other hand, it should be determined how a specific article of the law is implemented and whether it is implemented or not, and to what extent the error between the law itself and the reality we encounter in the general education system is considerable. The main purpose of the article is to shed light on the existence of this error between the law and its enforcement in the system itself. Quantitative method is used as a study methodology: survey through electronic questionnaires. 500 young people aged 16-18 studying in public schools in Tbilisi Municipality were surveyed for the study. The study revealed that 72.6% of the surveyed students had been verbally abused at a public school. In addition, 80.2% witnessed the discriminatory statement made by the teacher. It is noteworthy that 53.6% of respondents say that the general education system is not fully based on liberal-democratic values, while 28.4% believe that it is the system based on these values.

Taking all this into account, we can conclude how irrelevant the implementation of the current legislation of Georgia in the general education space of Tbilisi is.

Keywords: General education system, law on education, implementation, values, obligations.

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Section - Humanitarian and Natural Sciences; Business

The Phenomenon of „ trolls“ and „bots“ and Their Impact on the Georgian Reality when Covering the Problems of Covid-19

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Abstract

In the paper presented for the conference there are discussed mainstay of manifestation of so-called "trolls" and "bots" and the reasons for their creation; specificity of development, major cases. Also, the similarities between them - distinctive features and the ways to combat this phenomenon, and what's the main, we will discuss how the creators of "trolls" and "bots" used for dissemination of fake information about "Covid-19". The urgency of the issue is caused by the fact that it is directly related to our security. In current age of technology, the Internet is an integral part of every person's life, and dissemination of fake information is becoming more and more widespread. This situation threatens not only our small country, but the whole world.

The fact that despite the great importance of the topic, the level of public awareness on this issue is quite low increases the relevance of our research. Based on the relevant materials found in the Georgian and foreign media, we can more or less identify the causes of the activation of "trolls" and "bots", their main characteristics and distinguishing features. It is also important to understand the efforts made by the government or civil society leaders of Georgia and other countries in this regard.

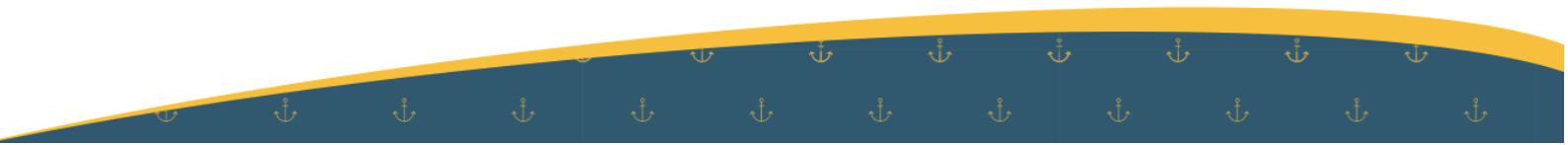
With the answers given to the pre-compiled questionnaire provided by the experts and researchers of this issue, we will create more or less objective picture of the situation in this regard; We will be able to understand how fake information affects the perception of reality, formation and formation of public opinion. Through analysis of high-profile examples of other countries, we will try to identify effective means of combating them and the possibilities of using them in the Georgian reality. The research process envisages systematization of retrieved Internet materials - classification, content analysis of individual cases and media texts.

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Qualitative research will allow us to analyze the issue in depth and in a complex way. Analysis of opinions of experts will help us to expand and study the issue as much as possible, as well as it will show how powerful and influential the "trolls" and "bots" are and how they can be used to harm the public. Finally, it clearly demonstrates the need to combat them, as information warfare is often no less dangerous than armed conflict.

Keywords: Trolls, bots, Covid-19, experts, internet space, experts, examples



Ensuring the Inviolability of Private Life at the Stage of Carrying out Covert Investigative Action

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Abstract

Criminal law, as the most severe area of human rights abuses, needs to be properly regulated to prevent unwarranted interference with fundamental human rights. Covert investigative activities are directly related to the restriction of the right to personal privacy, although it is permissible to achieve the legitimate aim provided by the Constitution. Such types of covert investigative actions, such as covert tapping and recording of telephone communications, are painfully perceived by the public and are subject to special attention. In 2012, about 29,000 records of illegally obtained telephone communications were distributed via Internet, causing public outcry and activation of non-governmental organizations, which commenced campaign - "This Affects You Too" and "They Are Still Listening" in 2014. For the purpose of elimination of possibilities for illegal listening, package of legislative changes has been submitted to the parliament and from this period to this day, the legislation is in the process of improvement to protect the private life of a person as much as possible from unjustified and illegal interference. The paper reviews the pros and cons of legislative changes made, with particular emphasis on N625 Decision of Constitutional Court as of April 14, 2016, which served as a turning point in the protection of human rights. It is impossible to properly protect private life of a person during conduction of covert investigative actions without effective control mechanisms. The paper reviews the pros and cons of control mechanisms. Review of the practice of the Constitutional Court and Court of Human Rights promoted identification of problems and searching the ways of their solution.

Keywords: Covert investigative actions; invasion of privacy; data acquisition; crime investigation

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What are the Changes that Ecosystems in Eastern Georgia undergo at the Times of Global Warming?

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Abstract

Today, climate change is already recognized as 5th major factor of reduction in ecosystems, along with habitat degradation, overuse of resources, environmental pollution, and invasive species. The climate on Earth is becoming warmer and warmer due to the accumulation of carbon dioxide and methane in the atmosphere, which in turn is linked to the use of fossil fuels, deforestation and cattle farming. According to the forecast, in some regions of Eastern Georgia there is rise in temperature and decrease in precipitation, and in others - floods and mudslides. This has dramatic negative impact on ecosystems, especially those being on the edge of their global natural distribution. As a result, significant changes will take place in the distribution of these ecosystems, plant communities, species of flora and fauna. Due to the mountainous terrain and sharply defined vertical zoning, the most serious threat to biodiversity in eastern Georgia will be as a result of replacement of vertical belts. Some species are likely to disappear altogether as they will not be able to adapt to the changes caused by climate change. Alongside climate change, some plants in Georgia, e.g. Pine has become more vulnerable to certain pathogens. Maintenance of sustainable ecosystems, including forests, is important not only in terms of biodiversity conservation but also as a "tool" to mitigate negative effects of climate change, carbon sequestration and climate change adaptation. For example, the main threat to plants (including endemics) in Kazbegi region, as well as to the entire Greater Caucasus flora, is anthropogenic impacts and ongoing global climate change. The climate of Eastern Georgia is close to the continental climate. All these factors, as well as absence of forest cover, create favourable conditions for the formation of cover of loose-fragmental deposits.

Keywords: Global warming, ecosystems, endemic, relict, mudflow, temperature, precipitations, climate.

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Factors Affecting Transportation Business in a Down Economy

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Abstract

Against the background of current globalization in the world and based on the location of Georgia, development of the country's economy is directly linked to the smooth and efficient operation of transport sectors.

Georgia's transport and logistics sector includes maritime, railway, road and air systems, which have corresponding load in presentation of Georgia as a potential transit country.

On March 11, the World Health Organization (WHO) announced global pandemic in connection with COVID-19, which directly affected the transport sector.

Air transportation has been discontinued around the world, and states made decision to ban domestic shipments and passenger transportation. In spite of the fact that the final assessment is not yet available, the economic impact on transport sector, caused by the spread of virus is likely to be severe. Insofar as transport is directly related to economic development, loss of income is inevitable.

Keywords: Globalization; transport section; pandemic, crisis

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Corrupt Practice and Institutional Development of Country

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Abstract

The countries on the challenging way of development that have just gained independence are characterized by specific feature of development. In a short period of time, such countries have to establish stable democratic institutions, take their own place in the international community, as well as solve social and economic problems, while the institutions of other countries have been formed over the centuries.

For young democracies of post-Soviet countries, the threat is not only the external interference in their domestic affairs, but even more so, the ongoing processes within the country that threaten statehood. A country like Georgia should do its best to avoid such mistakes, as it will significantly determine the country's sovereignty and democratic development.

Post-Soviet type state institutions did not find themselves ready for independent governance that created damaging processes for the country. The most dangerous of these processes for developing countries, is corruption, which is a metastasis-like formation for the state.

In the words of Machiavelli, the initial stage of such political disease is difficult to notice but it is easy to cure. That is why it is important that young, democratically developed countries pay particular attention to corruption, identify what elite corruption is, and respond quickly. Uncontrolled corruption can weaken the country's institutions and delay its democratic development. It is especially important to discuss and research corruption as an event, because its scientific study does not have a long history and is a modern phenomenon.

Keywords: Elite corruption, developing countries, state institutions, democracy, public.

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John Locke - Modern Liberal Democracy

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Abstract

The paper about John Locke's modern liberal democracy is focused on the need for a limited administrative governance restricted by constitution, which minimizes the threat of tyranny and abuse of authority, and places an important emphasis on civil society, which generates desire of helping society and fellowmen. Not least important are the words regarding human life that God-given life is the most precious thing for mankind and its protection is respect for the name of God and we should not forget freedom, which is better to be restricted by religion and morality than to turn it into chaos and make a person feel that he can do whatever he wants.

Nowadays, it is very important to talk about freedom and civil society, and the goal of my paper is to perceive that sometimes it is better to impose certain restrictions on ourselves and take care of the lives of both ourselves and those around us, and thorough understanding of civic-mindedness, reach the conclusion that it is possible to build a better state by supporting each other.

Keywords: Constitutional monarchy, civil society, velvet revolution, freedom, moral.

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Conservatism

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Abstract

In this paper, we discuss conservatism, its origination, its original meaning and its modern meaning. We will also talk about the development of conservatism, what path it has taken before it gets the look it has today. We must also focus on important aspects such as the basic characteristics of conservatism: tradition, human imperfection, hierarchy and power, organic society and property.

We will make comparisons between conservatism and other ideologies, their characteristic similarities and differences. We discuss how conservatism views society (they believe that society is one whole living organism), how it views human nature (they think people are essentially limited and people seeking security).

Keywords: Tradition, hierarchy, human nature, human imperfection, society.

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International Terrorism in the Age of Globalisation: Challenges and Perspectives

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Abstract

Terrorist activity was always used as illegal, but „effective“ way to solve social-political conflicts. Today it represents serious problem. In due course of time, it is changing forms, methods and means of terrorist activity, which are based on the latest achievements of science and technique. Today, neither state nor citizen, do not have any guarantee that they can avoid this widespread threat. Scientific research of fighting against terrorism and similar crimes and legal problems related to them, due to the nature of the event, represents difficult process, it requires a complex approach and needs theoretical-methodological study.

Dealing with difficult challenges in the Middle East has great importance for international peace and security, and especially in the background of significant increase of threat of terrorism which in itself poses a serious challenge to global security. One of the major challenges to global security from the Middle East - terrorism - involves the whole of Europe, not just Europe.

Terrorism is a global problem that threatens to maintain peace and security in the world. Since 2001, strong organizations such as the United Nations, NATO, and the European Union have been looking for ways to protect themselves from the threat posed by terrorism. States strengthen border security, as well as protect information sources, and so on. Despite the measures taken, there is no strong defense mechanism against terrorism. For this it is necessary universal cooperation of all states and international organizations in the field of terrorism in order to prevent terrorism through common network connections.

Keywords: Globalization, Ideology, Terrorist Act, International Organization, Separatism

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