“MIRCEA CEL BATRAN” NAVAL ACADEMY

SEA - CONF 2017
3rd INTERNATIONAL CONFERENCE

Book of Abstracts

May 18th – 20th, 2017
Constanta

ISSN 2457-144X
ISSN-L 2457-144X

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1. THE MILITARY BRIEFING - A TYPE OF INFORMATIVE SPEECH

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Abstract: *Speech is important in the life of any military officer. Each officer must be a competent communicator. The primary job of every commander or staff officer is to get things done through the people who are in lower positions in the chain of command. This means that they must be able to speak accurately, briefly, and clearly. Most speaking in the military field is done to make something clear or to achieve agreement concerning a plan or a policy of any kind. The response attended is usually understanding in preparation for some actions that had been suggested in the briefing. The present paper intends to underline the purpose of a military briefing, its most important traits, and the best way to organize the material so the audience could understand better.*
Key word: *briefing, informative speech, accuracy, clarity.*

2. THE NECESSITY OF IMPLEMENTING A NEW TIDE GAUGE SYSTEM ON THE ROMANIAN BLACK SEA COAST

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Abstract: *The analysis of the sea level record at the Black Sea reveals a significant rising trend. This study presents the changes of the Black Sea level, analysing the data from nine tide gauges locations. It also introduces a new system of tide gauges at the Romanian Black Sea coast. The five sites where the tide gauges will be placed are: Sulina, Sfantul Gheorghe, Gura Portitei, Constanta and Mangalia. The information will be stored on a computer and transmitted via a network. The main purpose of this study is to determine the datum.*
Key words: *Sea level, Black Sea, tide gauge.*

3. THE IMPACT OF THE SEA WATER FREEZING PHENOMENON ON MILITARY OPERATIONS ON THE ROMANIA'S BLACK SEA'S SHORE

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Abstract: *The purpose of this paper is to emphasize the importance of studying the ice regime at the Black Sea, as there are not many studies made on the Black Sea's water freezing phenomena. Based on the few studies made in this domain, which include meteorological data analysis, satellite images of the main parameters which determine the optimal conditions for sea ice formation, periodic measurements and observations of the ice evolution along the past decades, we have analyzed their results and drawn some conclusions regarded to the negative influence of these rare but very important phenomena on the main military activities executed on the Romania's Black Sea's shore by different naval, air and special units forces.*
Keywords: *ice regime, freezing phenomena, military activities, meteorological data analysis.*

4. SURFACE ANALYSIS OF SAE3310 CARBURIZED STEEL IN ENVIRONMENT SATURATED WITH CARBON NANOFIBRES

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Abstract: *Carburizing process is described by reaction between environment atmosphere and metal surface followed by carbon transfer in metal matrix. The main issue of heat treatment consists in ensuring the carburizing controlled atmosphere with a superior carbon potential level than metal surface of steel, in the carburizing furnace at a temperature that ensures process development. Obtaining carbon nanofibres relatively easy, led to a new carburizing treatment, in atmosphere full of carbon nanofibres. Use of nanomaterials for carburizing requires less time and best diffusion. Most common area of carbon concentration and residual austenite presence, the edges and corner, are sensible reduced, the hardness is higher than the hardness obtained in regular carburizing treatment. Experiments made on samples of steel SAE3310has demonstrated the beneficial role of presence of carbon nanofibres in carburizing atmosphere. It has developed the conclusion that the carburized layer properties depend on the amount of carbon nanofibres, during carburizing.*
Key words: *carburizing, carbon nanofibres, carbon potential*.

5. ANALYSIS OF INPUT/OUTPUT SIGNALS IN TECHNOLOGICAL HYDROABRASIVE EROSION SYSTEM

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Abstract: *Analysis of I/O signals in technological hydroabrasive erosion system allows highlighting different categories of signals: work piece design (dimensions, tolerances, roughness, accuracy etc.), material properties (hardness, mach inability, material type, chemical structure, etc.), and parameters of the hydroabrazive equipment and values of external power (water and air pressure, temperature and water quality, electric values). This paper presents optimization of hydroabrasive erosion technology by applying robust design and reduction of variation system responses, insensitive to stochastic behavior of uncontrolled factors. Measuring the influence of each individual input is done using statistical and experimental tools. Analysis performed allow the establishment of a relationship between the input signal variation and the variation of result, obtaining finally, reduction in the area of dispersion of the results and a significant increase in the quality of process hydroabrasive erosion. In order to streamline robust design effects and increase process stability through its applicability to the types of products, has developed an algorithm that allows parameters configuration choice so as to the result present invariable nessto a certain typology of products, ensuring flexibility of production.*
Key words: *robust design, hydroabrasive erosion, I/O signals*

6. DESIGN OF A STUDENT-CENTERED MANAGEMENT PLUG-IN FOR MOODLE LMS

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Abstract: *Moodle is a modern web-based Learning Management System (LMS) that is used worldwide by universities, education institutions, and even corporations (for training employees). Apart from the e-learning tools it provides, complemented by an active support community and commercial support, one Moodle's main features is the customizable architecture, which allows administrators to fit it to the needs of the teachers and students. Online courses in Moodle combine various types of learning resources and training activities, as defined by the teacher. There are many course layout plugins that change the way courses look to students. However, from the teacher's point of view, course management always happen on an activity basis, which can require extra work when managing large classes. We present the design considerations of a Moodle plugin that enhance course management by using a student-centered approach.*
Keywords: *student-centered management, software design, Moodle, plugin*

7. MICROTRANSACTIONS MODEL FOR MOBILE APPLICATIONS MARKETPLACES

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Abstract: *Mobile applications development has become a major source of income for the software industry, due to the technological progress that allows even low-end devices to run complex applications. In addition to the traditional free and buy-before-use, many business models have been created specifically for this type of commerce platform, like referral-based, ad-supported, in-app purchases and so on. The level of support that application marketplaces offer for these business models can also vary. In this paper, we present a model for application sales and in-app purchases based on micro transactions.*
Keywords: *micro transactions, simulations, modeling,*

8. GRAIN SEABORNE TRADE SHIPOWNERS STRATEGIES

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Abstract: *Grains are, as bulk cargo, included in the major dry bulk category along with iron ore and coal. The shipping principles demonstrate that the trend in seaborne trade on this segment of the bulk market is dictated by the relation between the supply available from the producing countries and the demand in the main importing regions. This relation is strongly influenced by the seasonal conditions which determine the quantities transported on the main shipping routes to vary. All of this makes freight rate to fluctuate along with the ratio of shipping demand and supply per time. This relationship defines the characteristics of the market in terms of structure, the number of companies providing transport services, scale of their operations, fleet size. Various studies conducted in this regard have concluded that this market activity is conducted in such manner as it can be considered a "perfect competition". In these conditions the ship owners and operators develop their strategies based on statistical analyzes related to the temporal evolution of grain production, and forecasting trends for the entire shipping system analyzed.*
Key words*: dry bulk shipping market, grain seaborne trade, shipowner strategies.*

9. LIQUEFILD NATURAL GAS CARRIERS. PRESENT AND FUTURE

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Sorin Marian VASILACHE[2]
Alexandru Nicola RAICIU[3]

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Abstract: *LNG & LPG are the fleet of modern and efficient vessels, all built in the accordance with the most up to date specifications and fitted with new and efficient technology which carry liquefied natural gas and liquefied petrol gas all around the world. The companies which own those vessels operate in ways that balance economic, environmental and social considerations in a responsible way. Their sustainability performance is ranked in some leading index. They maintain the strong investment in projects that will deliver energy resources for decades to come. They also continued to work to reduce the impact on the environment, to respond transparently to the views of their neighbors and to generate jobs and business opportunities for local economies.*
Keywords*: LNG & LPG ships, liquefied product characteristics, gas carrier characteristics and design.*

10. UNMANNED AERIAL SYSTEMS IN MILITARY ENVIRONMENTS: THE BENEFITS OF INTEROPERABILITY

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Alexandre Valério RODRIGUES[2]
Mario Monteiro MARQUES[3]
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Abstract: *Nowadays, the use of Unmanned Aerial Vehicles (UAVs) is a growing presence in both civilian and military environments, which has resulted in an opportunity to explore this technology, its benefits and how they can be improved. This paper aims to present a study focused on the impact of UAVs in military environments and how interoperability can further develop the benefits of the use of unmanned systems. It presents the importance and motivation for the use of UAVs, developing to a description of an UAV and its supporting structure. Afterwards, the study presents the primary military UAV applications, as well as studies that have been conducted to develop UAV capabilities in performing tasks such as surveillance, reconnaissance, search and rescue, and hazardous materials detection. Following the study of UAV in military scenarios, an approach to interoperability of unmanned systems is presented: its concept, and a project that has proved its reliability, converging to the benefits of interoperability. Overall this study hopes to improve awareness regarding*

unmanned systems and how it can play a key role for the future of military technology.
Keywords: *Interoperability, Unmanned Aerial Vehicle, Military.*

11. KEY TRENDS IN THE GLOBAL PORT DUE TO TRAFFIC VOLUMES

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Abstract: *In recent years, the ports are facing issues like: operation of biggest ships, connectivity to the hinterland and competition with other ports to attract new traffic volumes. Alliances that form on some routes conduct to an increasing freight volume for certain ports positioned favorably to the main logistics chains. Thus, there are situations where ports operate equal volumes of cargo by a different number of terminals. This matter is not liked by the shipping companies, because they'll have to operate all traffic in more than one place. As shown in the article below, the fragmentation of a port's capacity represents an important issue to which ports have to deal with in context of increasing traffic volumes.*
Key words: *shipping, port, traffic volumes.*

12. MARITIME TRANSPORT

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Abstract: *Maritime transport is a branch of the economy in the world, playing a key role in the relationship in time-space between the different geographical areas of the world. It creates links of value between regions*

and human groups, with a view to carrying out certain categories of complex commercial and economic activities. The work of the maritime transport represents an accumulation of multidimensional services with character, which has encouraged and influenced various aspects of human existence.

13. TRANSPORTS IN ROMANIA

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Abstract: *Transport system is not only the connection between economic branches and the circulation system on trade in goods between the different states of the world, but also an important factor in the training population GDP and employment. Without a system to transport organized at the global level can be achieved international economic trade and cannot integrate in the world of all areas and geographical regions of the world and cannot benefit from the advantages of globalization. Efficiency of economy depends not only on technical quality or productivity, but also to transport quality in all modes of transport.*
Key words: *transport on the water, priority projects.*

14. PHYSICAL PROPERTIES OF THE SIGACIK BAY

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Abstract: *Sigacik Bay is one of the small bays along the western coast of the Turkey connected to the Aegean Sea. Seasonal variations of temperature and salinity in the Bay based on data sets collected in summer and winter 2016. In winter, Sigacik Bay water exhibits a homogenous temperature and salinity vertical distribution due to winter convection and wind mixing. In summer, it is vertically stratified due to strong evaporation. Sigacik Bay region is under the influence of northerly winds all around the year. To*

understand the circulation regime of the Bay, in-situ current measurements were done and a numerical ocean model was applied for the region. The observations were used to validate the numerical circulation model. The results of the observations and circulation model show the cyclonic circulation over the western part of the Bay. Strong southward wind patterns create a very strong current along the eastern coast of the Bay. These two regimes meet at the center of the Bay and transport the water offshore.

15. FRACTAL DESIGN: A NEW PATH TO IMPROVE EMS ORGANIZATIONAL INTEGRATION ASSESSMENT PROCESS

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Abstract: *Sustainability has become a critical issue for today world and for the future of tomorrow. The issue of organizations sustainable development involves a new orientation which implies implementation and integration of effective management tools. Such a management tool considered as being a driving force to sustainable development and value creation is Environmental management system (EMS) design according with ISO 14001 or with EMAS. The current literature on the ISO 14001 EMS has largely neglected this phenomenon of integration (internalization). It is also necessary to mention that scientific literature shows only a few interdisciplinary studies on environmental management science that integrates the Fractal philosophy approach, and even less in the field of EMS. This paper presents a theoretical framework based on Fractal philosophy principles in order to assess the EMS organizational integration process.*
Key words: *Fractal assessment methodology, EMS integration, ISO 14001, organizational sustainability.*

16. FRACTAL EMS INTEGRATION: A DRIVEN FORCE TO INCREASE ORGANIZATIONAL BUSINESS PERFORMANCE

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Abstract: *Environmental management system (EMS) design according with ISO 14001 intend to provide organizations a management tool in order to achieve environmental and economic goals, and to respond to the concerns regarding sustainable development. Businesses which have implemented the EMS must analyze the consequences/effects of environmental management activities on businesses performance. The literature presents the fact that ISO 14001 EMS brings multiple benefits to organizations. In the literature few articles try to explain better the relationship between ISO 14001 EMS and performance. Likewise Yin and Schmeidler (2009) argue that studies are needed regarding ISO 14001 EMS integration in order to understand performance change. Also Iraldo and his collaborators (2009) present the fact that EMSs have not yet achieved a high degree of "maturity" in their implementation and a "new philosophy" must be developed. Consequently this paper aims (1) to clarify theoretically the organic relation between EMS integration and organizational business performance, and (2) to set up the basis for changing the EMS paradigm through Fractal philosophy.*
Key words: *Fractal philosophy, EMS organizational integration, organizational business performance.*

17. ACCOUNTING ISSUES CONCERNING THE INVENTORY COUNTING

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Abstract: *The issue of closing accounting cycle includes, at least once a year, organizing and carrying out the inventorying of firms assets, liabilities and equity. We understand the inventorying as a useful tool for accounting adjustment and inventory control. On this occasion one can notice many differences regarding the amount and/or the value of the inventories owned by the enterprise. Their accounting treatment is conditioned by the specific coordinates of each and every case. Every situation, the differences are detected and causes that determined them are identified. If confounding items of entered or withdrawn inventory was possible, they use to make differences compensation. If, after realizing it, any quantitative differences persist, the pluses are recognized as inventory replenishing, and downs are reflected as decreases in inventory. The occurrence of a minus can have objective technical causes. But sometimes it is caused by certain persons. After the determination of the responsible persons for the emergence of minuses, they are to be recovered from these people.*
Key words: *inventory counting, differences, compensation.*

18. ABOUT THE ACCOUNTING OF EQUITY SHARES HELD BY FINANCIAL AND CREDIT ENTITIES

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Abstract: *Today, unlike a few years ago, non-banking financial institutions and credit institutions apply different set of accounting regulations. Regarding financial assets the accounting rules sets diverge. Names given to different categories of titles in the chart of accounts are different, and also how to recognize them. Entities hold equity securities for certain periods and with specific purposes. The major difference is the duration of time of ownership. Shares can be held as current assets or as fixed assets. It also come the specific modalities of recognition and evaluation of securities, having accounting implications. Sometimes it's proper the valuation of securities at their cost, sometimes at their fair value. Considering the assessment of the securities, we also find some similarities. A specific accounting treatment occurs at securities revaluation.*
Key words: *equity, valuation, revaluation.*

19. LANDSLIDE SUSCEPTIBILITY MAPPING USING GIS-BASED MODELS AND REMOTE SENSING DATA IN HIGH PART OF OUMERRBIA WATERSHED (MIDDLE ATLAS, MOROCCO)

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Abstract: *Landslides are among the most important natural hazards that lead to modification of the environment. This ground displacement can severely damage human lives and infrastructure. High basin of OumErRbia corresponds to a mountainous landscape where landslide problem are common in steep rivers' banks, due to slope, lithology and rainfall. In order to tackle this issue, the present work was conducted to generate a landslide susceptibility map. For this, topographical, geological and remote sensing data were collected and processed using Geographic Information System (GIS) and ENVI. Eight separate maps that include land cover, lithology, distance from road, distance from fault and hydrographic network, altitude, orientation and slope gradient in the study area, which is the high part of OumErRbia watershed, in the middle atlas of Morocco. These factors were analyzed for construction of thematic data layers. Numerical weight for each factor was assigned by the Analytic Hierarchy Process (AHP) using Pairwise Comparison Method. The landslide susceptibility indices were derived using weighted overlay method (WOM). Data was collected and processed using Geographic Information System (GIS) and ENVI. As a result, landslide susceptibility map was produced in GIS. The susceptibility map classified the study area into very high, high, moderate, low and very low susceptible zones. The validated results have shown the good concordance between landslide occurrence and produced susceptibility map of the area. The map of susceptibility prepared by weighed to cover the method is validated for the risk of landslide, the reductions, and the construction of Planning of for future of land use in the sector.*

Key words*: Landslide susceptibility, GIS, Analytic hierarchy process, weighted overlay method, OumErRbia watershed*

20. BLUE TECHNOLOGIES IN COASTAL MANAGEMENT-RENEWABLE ENERGIES AND NUTRIENT RECOVERY

Nicholas KATHIJOTES[1]

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Abstract: *The European Innovation Partnership on Water (EIP) has identified specific actions to meet the relevant needs which have been codified into 8 priority areas. Focusing on two of the five thematic priorities (water and waste water treatment, including recovery of resources; and water and energy integration, this paper amplifies Blue Economy models aiming to shift society from scarcity to abundance through these new and novel ways. Inland and coastal waters are looked upon as 'water resources' that can contribute to the production of sustainable energies. In water reuse, the energy contained in wastewater is also examined in order to contribute to the understanding of the water/energy relationship. Energy is needed for water cycle management; water is needed for energy production and water reuse can help to save both. Biogas production, being an important green energy issue is also examined under the scope of wastewater treatment. Significant energy savings and recovery of nutrients can be achieved on major components of an 'efficient' wastewater treatment plant by applying novel blue economy principles. Zones where energy efficiency can be improved, as well as phosphorous recovery are explained always under a holistic water cycle management. Marine based renewable energies are also outlined based on coastal blue potentials and future world energy needs-provided that conventional energy sources are approaching exhaustion. Other general quality issues in coastal environments are presented and examined within the framework of the blue economy principle and thus suggesting actual novel sustainable management techniques.*

Key words: *Blue technology, wastewater treatment and reuse, water resources, nutrient recovery.*

21. THE USE OF THE ELECTRONIC MAP IN THE SURVEILLANCE OF THE ROMANIAN SOVEREIGNTY ON BOARD THE SHIP

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***Abstract**: According to United Nations Convention on the Law of the Sea, the sovereignty of a coastal State extends, beyond its land territory and internal waters and, in the case of an archipelagic State, its archipelagic waters, to an adjacent belt of sea, described as the territorial sea. Under the law 17/2002 – Republished in Official Journal of Romania no. 252, April 8, 2014, article 2, „The Romania territorial sea includes the strip of the sea adjacent of shoreline, where appropriate, internal waters, having the breadth equal to 12 nautical miles, measured from baselines". The observation, surveillance and Romanian border control at the Black Sea is in responsibility of the complex system SCOMAR. The operational units of the system include navy, land and air force. On board, the ships unauthorized entry in the territorial sea or contiguous zone can be detected using the radar. Using the electronic map facilities, the authors performed the territorial sea and the contiguous zone starting from the baselines. Thus, these areas were made as zones to overlap on radar. The aim of this paper is to show how electronic map can be used on board the ships for surveillance of the territorial sea or contiguous zone.*

Key words: *sovereignty, territorial sea, contiguous zone, electronic map, radar.*

22. THE ROMANIAN ASTRONOMICAL NAVIGATION TERMS AND ABBREVIATIONS AND THE NEED TO IMPROVE AND CHANGE THEM

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***Abstract**: Romanian astronomical navigation is based on the books authors Chirita M., Pavica V. and Balaban Gh. These known authors have influenced the training of the Navy and merchant officers from our country. The maritime industry, by definition, is international. The mariners from all corners of the earth are required to work together, communicate and interact. They are also required to train and be trained. For this purpose, the IMO, in 1995, designated one language, English, as the official language for mariners. Currently, due to the use of national nautical documentations, the Romanian Marine officers on board the ships encountering difficulties into using nautical documents, specific astronomical navigation terms and abbreviations to determine their fix position or to control the compasses corrections. This paper aim is to present how certain terms and abbreviations should be renamed for their correlation with international nautical documentations.*

23. DYNAMIC POSITIONING. A CASE STUDY

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***Abstract**: Ship's dynamic positioning (D.P.) it's technology with a fast development, born from a necessity of a precise positioning for offshore vessels inside of oil and gas reserve exploitation industry. In 1961 the ship Eureka was the first ship which was fully accepted as a DP vessel. For keeping the vessel or structure in fix position is few methods which include spread and fixed moorings or combinations of each. The jack-up rig or vessels using moorings or legs may also occasionally have DP control systems to assist the setting-up on position and, in the case of a moored unit, to reduce mooring line tension. Each system has advantages and disadvantages. Every ship it's a subject of wind forces, waves, and tidal movements, as well of propulsion forces and of other external elements. The answer of these forces is the ship movement, produced by changing the position and heading. These are measured by position reference systems and gyrocompasses. DP control system is calculating the compensation between the measured values of position/heading and the setting values and calculates the propulsion force to be generated to reduce the errors to zero. The aim of this paper is to present a case study regarding how it works the dynamic positioning system on board the ship operating in the Black Sea.*
***Key words:** dynamic positioning, fix position, external forces*

24. ENTREPRENEURSHIP AND ECONOMIC DEVELOPMENT. POLAND EXAMPLE

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***Abstract:** Entrepreneurship of the region is treated as a synonym of the sector of enterprises operating in the region. This is a narrow approach to regional entrepreneurship. The concept of regional (macroeconomic) entrepreneurship is intrinsically related to the development of the region, which is accomplished by the establishment of new enterprises, their gradual development, creation of new resources, markets, technologies, products, and services, processes and transactions leading to the increase of their value. The literature also suggests that regional entrepreneurship can be defined as the activities of the entities operating in the local area, which lead to the establishment of new enterprises in the area, resulting in economic development, thereby increasing the standard of living of its inhabitants and such activities of local authorities and business environment*

which stimulate the establishment of new enterprises and the development of technical and social infrastructure. Entrepreneurship and economic development of countries is very interesting issue. Development of small and medium enterprises is one of the instruments to tackle inequalities of economic and civilization. Adopting self-employment mobilizes the people directly involved and also becomes a factor of changes in the whole environment where create new jobs, it becomes an example and encouragement to others. This force those to upgrade their qualifications, acquisition of skills required in the conditions of free market competition. Enterprises contribute to the economic development of the country, which is enlarging the country's capacity to produce goods and services for example increase of Gross Domestic Product, which is a measure of output produced by the productive factors located on the territory of the country. The main objective of this article is to present the role of entrepreneurship in the Polish economy over the last decade, with particular emphasis on making the country's economic development in Europe. Regional Entrepreneurship is closely linked to the development of the region. An important element to the EU's regional policy is to support the development of enterprises, in particular small and medium constituting the core of a competitive economy. A major problem for the development of the SME sector in Poland before accession to the European Union was the lack of financial resources for implementation of development projects as well as limited access to information and external sources of financing. The consequence of such a state are currently low capital investment and the development of human resources, and poor cooperation with scientific - research units. The aim of the work is to identify and assess the effectiveness of European Union financial instruments in 2007-2013, which affected the formation of new businesses, as well as their empirical verification on the example of the Lodz region (central region Polish). As part of the exploration of the research problem is isolated following research question: a) Does the EU funds, which were used in the Lodz region influenced the development of entrepreneurship? Preliminary analysis of the problem made it possible to place the main research hypothesis, which assumes that the financial instruments of European Union policy, which is oriented to the development of entrepreneurship, can have a positive impact on leveling the level or pace of economic development of regions, the effects of the impact of these instruments should be seen in long term. The focus of this work was the development of entrepreneurship in the Lodz region, inspired by the financial incentives within the financial perspective 2007-2013. Łódź Province is a region situated in the center of both Polish and Europe. Given the very favorable location is considered lokalizacyjnie region attractive for

new investments, including foreign and business development. On the basis of considerations it is clear that as a great opportunity, unfortunately, the region is not fully exercised. Entrepreneurship, within the program period 2007-2013 the EU, has been the development - but the dynamics of these changes is not significant.

Key words: *entrepreneurship, regional development, regions, Poland, SMEs.*

25. THE ADAPTING AND APPLICABILITY OF JUDO'S SPECIFIC TECHNIQUES IN FORMING SKILLS OF FUTURE AIR FORCE MILITARY OFFICERS

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Abstract: *The forming, development and perfecting of the skills of future fighters with winning mentalities, from Air Forces, involved the creation of training programs that include: the development of movement abilities (speed, strength, endurance, coordination, flexibility), psycho - movement (body schema, ideo - movability, ambidexterity, laterality, decision speed, etc.) of a complex and versatile system of basic and useful - applicable movement skills in connection with techniques adapted from judo and last but not least with basic military instruction.*

26. EFFECT OF CLIMATE CHANGE ON THE PIEZOMETRIC EVOLUTION AND STATE OF WATER QUALITY OF THE BENI AMIR GROUNDWATER (TADLA, MOROCCO)

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Abstract: *The study area is characterized by a semi-arid climate and by an agricultural dualism, the bour and the irrigated. Under these conditions, there is an irregularity of precipitation and a variability of recharge of the groundwater, which undergoes overexploitation and deterioration of the quality of its waters. This work provides an overview of the problem of management of water resources in the Tadla and describes a comparative approach to the spatial distribution of piezometry during the period 2010-2015 and the spatial variation of the concentrations of the various elements allowing the estimation of the groundwater physicochemical quality. A study of the variation of the water table in the study area was made using the piezometric data from the period 2010-2015, in order to see the sensitivity of the water table to climatic vagaries that has known the region. In parallel with the piezometric study, a hydrogeochemical study was carried out to determine the state of the water quality and to detect the zones of contamination which negatively influences the groundwater quality. The comparison of the piezometric states revealed that the variation of the piezometric level between 2010 and 2015 is not regular throughout the zone. A rise in the piezometric level was observed in some places, while some regions recorded a decrease in the water table. On the other hand, the spatial variation maps of the concentrations of the different elements showed significant concentrations of nitrates in the irrigated perimeter due to the irrational use of fertilizers and pesticides that the farmers add in order to increase the productivity of the parcel.*
Key words: *Morocco, Piezometry, quality, groundwater, climate.*

27. ASSESSMENT OF THE MARINE WAVE ENERGY FOR THE NORTH-WESTERN AREA OF THE BLACK SEA

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Abstract: *The subject of this paper is to assess the wave energy for the north-western area of the Black Sea based for the last years from meteorological costal stations. Marine waves are a combination of the action of winds, gravity and surface tension of the sea surface. Wave energy is an indirect form of solar energy. The energy potential of waves generated from the north-western Black Sea is modest and efficient exploitation its almost impossible. Due to the irregularity waves and their height*

dependency during the year, makes the installation of wave energy recovery systems, remain from an idea, a concept.
Key words: *wave energy, NW Black Sea, meteorological costal stations.*

28. OPTIMIZATION OF TRAINING SHIP "MIRCEA" UNDERWAY ON ROUTE CONSTANTA TO NEW YORK

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Abstract: *The subject of this paper presents the optimization and safe execution of the training ship Mircea underway, between Constantza Port (Romania) and New York Port (United State of America), with a stoper for refueling. Training Ship „Mircea is a sailing – ship; she executed three ocean pass. The first one was in 1976, then in 2004 and the last in 2009. The last ocean pass lasted 40 days, when traveles 4700 miles marine. During the paper were studied navigation maneuvers in bad weather, the hidrometeorological condition during the march, the ways to execute safety the ship maneuvers input/output to/from port, passes through the straits, narrow passages or low visibility.*
Key words: *march, Constantza, New York, sailing-ship, ocean pass*

29. INCREASING TOURIST TRAFFIC IN NAVODARI AREA - EFFECT OF ADAPTING MARKETING STRATEGIES ADOPTED BY STAKEHOLDERS IN TOURISM AT MARKET DEMANDS

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***Abstract**: In the last 5 years, the tourist circulation in Navodari area has registered a significant increase. This is due mainly to the increase in the number of tourist structures, the adaption of the marketing strategies adopted by stakeholders in tourism in this region and the promotion of tourism products offered for sale on the domestic tourism market. Marketing strategies have targeted the launch of some diversified travel packages made to fully satisfy tourist demand manifested among segments of domestic tourists. As regards product policy, strategies of differentiation and flexibility have been adopted which aimed to adapt the offer to the needs of tourists. Tourism entrepreneurs in this area have given special attention to recreation services which have experienced a significant development in recent years.*
***Keywords:** tourism, strategy, demand, diversification.*

30. THE RELATIONS BETWEEN THE PORT BUSINESS FRAMEWORK AND THE QUALIFIED MANPOWER COMPETENCIES – LITERATURE REVIEW AND PROPOSED GUIDELINES

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***Abstract** The maritime, inland and river transportation framework counts as essential component of the international trade and of the global business environment nowadays, more than 80% out of the global or regional exchanges being basically grounded on these means of goods' relocation, due to the lowest level of unit prices of the services. In this context, the sustainable development of the naval transportation system alongside the Romanian-Bulgarian cross border area, became both countries' challenge,*

in order to achieve the desired business competitiveness, among other European states and not only. Implicitly, aiming for the economic productivity has became very relevant to build strong profiled human resources, accordingly qualified, based on adapted professional competencies in terms of its skills, abilities and knowledge, correlated with the required qualifications on the labour market in the naval sector. The authors have identified those professional and transversal competencies required by the port business sector, by investigating the nowadays international tendencies in rebound for the new technological and business developments for the freight services logistics. In the paperwork the author have shown how the research results will support the learning goals, using facts' data, concepts, theories, models but also practices, procedures, operations, intention and solutions techniques. The research results as initially drafted have been further validated by the relevant Romanian port business entities, in order to be adopted and implemented in the curricula definition process for the future, carrying the endeavour of defining the adapted skills, abilities and knowledge for the port adapted qualification framework. The paperwork is a scientific output of the POSDRU/ 161/2.1/G/140706 project implementation, entitled "Facilitating the insertion into the labour market of naval education" financed within FSE-POSDRU-Priority 2, Linking lifelong learning and labour market, POSDRU – 2.1 Key Area of Intervention Transition from school to active life.
Key words: port business, maritime education, maritime transports, logistics.

31. SYSTEM FOR SIMULATION, CONTROL AND EVALUATION OF EMERGENCY SITUATIONS IN THE EVENT OF POLLUTION WITH DANGEROUS SUBSTANCES

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Abstract: *Analysis of accidents on waterways, sea or river resulting pollution with harmful substances (hydrocarbons, chemicals) reveal that each accident is unique in its kind. Therefore, for each type of pollution a different strategy must be applied. In these circumstances, simulation, control and evaluation of these emergency scenarios, based on rigorously constructed scenarios, are necessary both to avoid or limit of possible mistakes and necessary for gaining experience used further for a correct approach to possible situations that can occur. Present paper is a result of the implementation of PISCES II (Potential Incident Simulation, Control and Evaluation System) in the research and education process of the "Mircea cel Batran" Naval Academy. Research undertaken by the authors highlights how this module helps to: reduce risks of pollution and response time; assign appropriate logistics and equipments to intervention; train human resource for effective management of emergency situations caused by pollution.*
Key words: *pollution, dangerous substances, emergency scenarious, containment.*

32. REDUCING POLLUTING EMISSIONS BY IMPROVING NAUTICAL FEATURES OF EXISTING COMMERCIAL SHIPS

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Abstract: *The paper treats a range of solutions for retrofitting commercial vessels to increase energy efficiency as a imposed necessity by new pollution regulations for the marine environment. Based on research made in this study area by major international shipping companies, the paper summarizes the main results obtained through various methods in order to improve nautical qualities of the ship.*
Key words: *retrofit, bulbous bow, new propellers, air-lubrication system*

33. FEATURES OF THE NEW CLIMATE OF GLOBALIZATION AND MEMBERSHIPS IN REGIONAL TREATIES

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Abstract: *Globalization is not a unique phenomenon of our time, but one with a long history. Each era has left its mark on what globalization meant. All the time people tended to know more and to connect with their peers from other lands. The latest developments in the Western Balkans and the Middle East, the orientation change US on NATO's evolution following the election of Donald Trump as president and tensions between the Russian Federation, the United States and Turkey about the situation in Syria, lead the new features of a new climate of globalization regionally and globally. This paper's aim is to highlight these new features and to bring to the attention of practitioners this paradigm change on regional treaties.*
Key words: *Characteristics, NATO, Western Balkans, Middle East, cooperation, regional treaties.*

34. RISK MANAGEMENT FOR COLISSION AT SEA

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Abstract: *Human error is widespread in the navy and merchant marine and literature confirms the need of research into maritime accidents. Investigation of a collision involves gathering evidence before the incident and after it. Some investigators agreed that the human factor is the main cause for putting ships aground, although few ships have recorded data from incidents that can later be analyzed as a chain of errors. Respecting COLREG rules, officers of the watch need a simplified procedure to indicate how to act in various circumstances, stressing out the fact that time in an*

important parameter in COLREG rules. This paper aims to analyze collision risk factors using Human Factors Analysis Classification System improved by Reinach Viale by introducing external factors in the classification. Operations with high level of difficulty that have to be dealt in short time, with overload can lead to impaired performance of the crew create and collision risk situations. Inadequate planning operations my become a problem when risks are not exposed or wrongly addressed.
Key words: *risk management, HFACS, collision, COLREG*.

35. THE TRADITIONAL MARITIME MARKET COMPONENTS AND ITS RELATIONS WITH THE GLOBAL MARITIME BUSINESS MODEL VARIABLES

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Abstract*: Traditionally, as approached within the applied literature concerning the maritime market components functional description, just four major segments have been depicted, namely: the freight market, the used ships trading market, the shipbuilding market and the ship scrapping market. These components were defined peculiarly within an integrated perspective, building together a well known and widely accepted maritime business model. But the naval industry logistic system became more than that, as nowadays other maritime business sectors come up as related dependent or even determinative to these predefined market segments. The authors have carried out a wide endeavor of redefining the maritime business components, defining a more comprehensive business model for maritime industry, promoting a new perspective for the Maritime Logistic Chain as well. The major contribution of the present article is due to the modern consideration of collaborative business model promoted as to be recognized and implemented within the maritime business on international level.*

***Key words**: maritime transports, business model, maritime market, maritime logistics.*

36. THE PORT LOGISTIC CHAIN DEVELOPMENT CONSIDERING THE MODERN SUPPLY CHAIN MANAGEMENT STRATEGIES

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***Abstract**: The port activities became throughout the last decades even more relevant for the economic variables, serving not only the national economies on a narrow scale, but also the regional economic areas, on a wider scale. In this context, the port development is supporting the idea of joining a regional strategy for spreading the economic advantages alongside a designed region, on mutual basis, commonly attached on the ground of joint competitiveness. The port development will get into a new development stage, as logistic centers, integrated in the larger supply chains defined in upstream and downstream flows of goods and services, as hubs of distribution. The article is meant to depict this new modern perspective of the Port Logistic Chain as connected to the global supply chains, describing on the basis, the role of the modern ports in the hub and spoke networks, defined on regional and international level. Valuing the concept's art of the state the authors aimed to decline to distinctive national approach on port function for the sake of a fresh, integrative perspective, harmonized on regional and international level.*
***Key words**: port management, maritime transports, business model, port logistics*

37. THE COMPETITIVENESS OF THE ECONOMIES OF THE WESTERN BALKANS IN THE CONTEXT OF EU ENLARGEMENT

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***Abstract**: The progressive integration of the European economy and the prospective enlargement to countries of the Western Balkans has become a contribution to search for answers to the question, what factors determine the international success of companies and whole sectors of the economy countries and prove its competitiveness and innovation on an international scale. Competitiveness in this paper, reference will be made for the ability to produce goods and services that prove themselves on the international market and its citizens will reach a growing and lasting improvement in living standards. A key factor to compete is its ability to innovate, which is a prerequisite to achieving sustained economic competitiveness in the global market. In its enlargement strategy, the Commission reaffirms that puts a strong emphasis on the principle according to which in the first instance be addressed fundamental issues in the accession process to the EU. Key priorities are such basic issues as the rule of law, fundamental rights, strengthening democratic institutions, including the reform of public administration, as well as economic development and competitiveness. Progress is being made, especially in the adoption of the law and the creation of the necessary administrative structures. Overall very often it lacking, but effective implementation. The Commission will continue to focus its efforts on ensuring that countries prioritize reforms in these key areas, and the results showed in this regard. The aim of this study is to formulate recommendations for the Western Balkan countries in the context of raising their competitiveness, which is an important measure of integującej the European economy.*

***Key words:** European integration, European Union, Western Balkans, competitiveness*

38. THE USE OF AUDIT OPINION IN ORDER TO DETECT FINANCIAL FRAUD BASED ON EARNINGS MANAGEMENT DETERMINANTS

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Abstract: *The main objective of the auditor is to ensure that the financial statements reported by the listed companies on a regulated market present in a true and a fair view their financial position and performance. In this context, the auditor should get appropriate audit evidence that the reported financial statements don't contain significant errors or fraud misstatements. For this reason, the auditor should obtain sufficient and appropriate audit evidence using audit procedures. Using analytical procedures, based on advanced statistical analysis methods, the auditor could get an overview related to the fraud risk. The purpose of this paper is to the present the use of the logistic regression analysis in order to obtain audit evidence related to the existence of fraud risk. The main indicators used in order to assess the fraud risk were the ones proposed Jones model (1997) for a sample of 64 Romanian listed companies. The research results reveal the influence of accruals accounting on the fraud risk.*
Key words: *financial fraud, audit opinion, audit procedures, logistic regression analysis.*

39. FRAUDULENT BANKRUPTCY RISK ASSESSMENT

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Abstract: *The assessment of fraudulent bankruptcy risk is important for all the stakeholders in decision making process. In this way, all the capital providers must consider the fraud risk and its influence on the company`s capacity to continue as a going concern with a direct impact on the return ratios. The purpose of this study is to assess the fraudulent bankruptcy risk, based on the published information from the financial statements. The study was carried out on a sample of 64 Romanian companies listed on the Bucharest Stock Exchange. The research results were obtained using discriminant analysis and we find out that specific financial indicators have a different influence on the fraudulent bankruptcy risk.*
Key words: *fraudulent bankruptcy risk, discriminant analysis, going concern.*

40. UNMANNED AERIAL VEHICLES: SYSTEM ARCHITECTURE AND PROTOCOLS

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***Abstract**: Unmanned Aerial Vehicles are nowadays a very important tool in any military organization. Especially in the navy, they can be used for many missions, in order to increase their success and efficiency, reducing at the same time the risk with personnel. This paper focus in the UAV importance, especially in the navy. Also, it introduces UAV system architectures, and how they can be helpful in the Navy, introducing an interoperability approach for these systems' protocols.*
***Key words**: Unmanned Aerial Vehicle, Architecture, Protocol*

41. BANKRUPTCY RISK – CLASSICAL MODELS VERSUS ROMANIAN MODELS

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***Abstract**: In a competitive economy, business evolution is closely linked to any type of risks and their manifestations. Bankruptcy risk is due to the likelihood that a company enters into default or be declared bankrupt.*
Knowing the threats related to companies, the determinant factors of risks are essential information for managers, shareholders, investors, suppliers or customers. This paper presents classical models based on scores of forecasting bankruptcy risk (Altman, Conan & Holder, the French model, etc.) compared to models used in the Romanian economy (Anghel, Mironiuc Robu, Cămăşoiu etc).
***Key words:** risk of bankruptcy, methods, rates JEL Classification: E27, G17, M21.*

42. THE EFFECTS OF FDI ON ECONOMIC GROWTH IN EUROPEAN UNION

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***Abstract**: Foreign direct investment (FDI) is support the economic development of a country, influencing the economy and leading to increased productivity and increased the competitiveness. In the same time, FDI have a decisive contribution to increasing labor's employment, technological development and the changing of ownership structure. Starting from theoretical studies and empirical analyzes on FDI and economic growth, this study addresses the impact of FDI on economic development in the European Union.*
***Key words:** FDI, economic growth, GDP, European Union, JEL Classification: F21, F23, F63, O11, O52.*

43. MODELLING OF TURKISH MARITIME TRANSPORTATION FLEET'S EMISSIONS AND REFERENCE ENERGY SYSTEM

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Abstract: *Maritime transportation is the most environmentally-friendly mode of transport with respect to air and road transport and considered as a safe system for years. This form of transportation is increasing due to the globalization of manufacturing processes and the increase of global-scale trade. However, maritime transport is seen as an important source of emissions worldwide. Maritime shipping produces an estimated 2.7% of the world's CO_2 emissions, there are also other emissions from ships respectively NOx, SOx, CO, HC, VOC and particulate matter (PM). All these emissions threat people's health, life quality and environment. For that reason, ship based emissions have to be analized carefully. Following this target, this paper is concerned with the optimal fuel consumption pattern focusing on Turkish Maritime Transport Fleet emissions within the next 40 years (up to 2050). Using MARKAL (an acronym for MARKet ALlocation) Maritime Transportation model, various steps as designing of ''Reference Energy System (RES)'' of the model, data processing and prepare of scenario are followed.*
Key words: *emission, maritime, fleet, model, MARKAL.*

44. IMPLEMENTATION OF NON-LETHAL DEFENSE SYSTEMS ABOARD COMMERCIAL VESSELS FOR CLOSE COMBAT TERRORIST THREATS

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Abstract*. Implementation of non-lethal defense systems aboard commercial vessels for close combat terrorist threats is just an idea of protection against any threats that can jeopardize the ship, cargo or sailers. If the military can develop and use a non-lethal, directed-energy weapon that is designed for area denial why not design a similar system, but for commercial vessels. Imagine that each ship could be equipped with a system based on millimeter-wave transmitter that could protect against possible attacks, putting an end to piracy. The impact of this system would not only eliminate*

close combat to defend the ship but even remove the costs of protection paid when ships transit dangerous areas. Rapid heating of the target's skin followed by a rapid deviation from the original path of any potential risk is the effect that it wills creat. Even if the system requires a larger investment, mitigating will be felt over time. Developing this system followed by applying some specific operating procedures would ensure a correct and legal use. The system works by firing a high-powered beam of 95 Ghz wave of heat, similar to the microwave oven, that excite the water and fat molecules from the skin. A smaller version of the army system would keep the commercial vessels safe from any attacks, a simple idea but with big consequences.

***Key words**: non-lethal; defense systems; terrorist, commercial vessels.*

45. IMPACTS OF INTEGRATED MONITORING SYSTEM UPON CONTROL AT SEA

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***Abstract:** This paper treats problems concerning different aspects of control at sea. Normally, it includes control and safety of various activities at sea and environmental protection. Trends in management process show that it is necessary to divide maritime areas into zones with precise spatial dimensions and activities to be organized in particular groups – navigation, offshore activities, marine agriculture, tourism, etc. Contemporary researches in maritime safety point out that the control of sea is available by means of integrated maritime surveillance systems. The impact of coastal state`s authorities needs of reliable surveillance system which helps in real time situational awareness. Moreover, coordination between governmental institutions, non-governmental organization and multinational cooperation and mutual understanding between neighboring countries is another milestone. Integrated maritime surveillance is sub-system of maritime control system that figure out its essential characteristics.*

***Key words:** control at sea, maritime safety and security, risk management, safety of navigation.*

46. MATLAB FUNCTION FOR COMPARING TWO STRINGS

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***Abstract**: Strings play an important role in the programming field. The programming languages offer to the programmers many functions to operate on strings. An important operation is the comparison of the strings. Matlab offers a set of functions for elementary operations with strings like: strcmp, strcmpi, strncmp and strncmpi. All these functions test whether two strings are identical or not. They do not offer information about the order in which the strings are compared relative to the ASCII codes order of the characters. In the C language there are defined the following functions: strcmp, stricmp, strncmp and strncimp that test the order of two strings according to the ASCII codes of the characters. In this paper, the author presents an implementation in Matlab of a function that produces that same comparison results as the strcmp function in the C language.*

47. POST GRADUATE EDUCATION IN MARINE ENGINEERING: INNOVATIVE FORMS AND PRACTICES

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John S. KATSANIS[2]
Efthimios G. PARIOTIS[3]
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***Abstract:** The Section of Naval Architecture and Marine Engineering of Hellenic Naval Academy in Greece has long-standing and significantly broad teaching and research experience in the fields of marine engineering, applied thermo-fluid dynamics, marine engines, HVAC systems and alternative energy sources. Under the proposed study, a holistic approach,*

flexible and based on the relevant industrial experience is suggested. MSc Courses (multiple postgraduate diploma courses), fulltime and part time, are offered combined to Short Courses (customized professional development courses). Both are hybrid, i.e. conventional and web based. Virtual Laboratories and simulators are extensively used. Regarding the content, Marine Engineering is directly related to Economics and Management and also to Life Cycle Analysis of Marine Energy Systems.

48. FOUR – STROKE MARINE NATURAL GAS - DIESEL AND GAS SPARK – IGNITED ENGINES: A STATE-OF-THE-ART TECHNOLOGIES EVALUATION

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Abstract: *The continuously stringent environmental regulations that have been issued by International Maritime Organization (IMO) for NOx, SOx and CO_2 emissions and the growing market share of LNG and CNG transport vessels have stirred significant interest over two – stroke and four – stroke marine natural gas internal combustion engines. Growing attention to the reduction of shipping-emitted gaseous pollutants and natural gas waterborne transport will make four - stroke dual – fuel (natural gas – diesel) and spark – ignited natural gas engines, which are currently used as either main propulsion and/or auxiliary engines attractive for various commercial and military marine applications. Dual – fuel and gas engines today have already reached competitive power density i.e. BMEP levels and comparable or even higher thermal efficiency levels compared to those of*

four – stroke diesel engines. In order to boost a long term growth trend of gas engines, further improvement in power density and thermal efficiency is demanded. The main objectives of the proposed study is the detailed assessment of the state-of-the-art technologies of four – stroke dual – fuel and spark – ignited natural gas engines from technological, operational and environmental standpoints and also to evaluate contemporary techniques used for the improvement of the efficiency and the power concentration of marine four – stroke dual – fuel and gas engines. The final outcome of the proposed study will be the definition of the parameters that should be taken into account to identify the optimum four –stroke natural gas engine technology frame, which can be used in the near future, as either main propulsion or auxiliary engines in marine applications.

49. SHIPYARD BUILDING LOGISTICS SYSTEM INFORMATISATION

Patrick OTTI[1]

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Abstract: *Logistics can be interpreted as the process which manages in a strategic manner the transfer and storage of materials, the components and finished products from the suppliers, acrossing the society until the products go to the consumers. Computer-aided production management enables automation of a series of difficult calculations, respecting the data which concerns the product and the manufacturing range. Information data plays a crucial role in the proper conduct of the activities of any organization. As a result, the importance of information system in the supply chain is significant, on which it depends the satisfaction of customers, so the overall efficiency and effectiveness of the organization. ERP, which means Enterprise Resource Planning, is software that facilitates the integration of all information data within an organization into a single platform. The purpose of ERP is to ensure transparency of data within an organization and to facilitate acces to any relevant information of any activity. Located in the Black Sea area, Şantierul Naval Constanta SA is ranked among the largest new-buildings and ship-repairs yards in Europe, the world's 3rd place shipbuilder for medium range products & chemical tankers.*

50. INTERNATIONAL MARKETING MIX IN THE TIME OF CRISIS IN EUROPE

Filiz AGAOGLU[1]

[1] PhD Student, Bucharest University of Economic Studies International Business and Economics

Abstract: *The purpose of this research is to reach clear understanding of banks' marketing mix throughout an international financial crisis. The objective of the study is to find out how has Garantibank used the marketing mix to manage the negative hit of the latest financial crisis and how and why has the marketing mix of Garantibank changed over the different stages of the latest financial crisis. Results of each case will be noted. The similarities and differences between marketing mix decisions in the two countries will be analyzed. We will come a conclusion the effect of those changes in the time of a global financial crisis.*

Key words*: Financial crisis, International marketing mix, Garantibank, Turkey and Romania.*

II. MECHANICAL AND ELECTRICAL SCIENCES

SECTION COMMITTEE:
Professor Eng. Anastase PRUIU, PhD
Professor Eng. Beazit ALI, PhD
Associate Professor Eng. Corneliu MOROIANU, PhD
Associate Professor Eng. Dumitru DASCĂLU, PhD
Lieutenant Commander Associate Professor Florenţiu DELIU, PhD
Lecturer Nicolae BĂDĂRĂ, PhD
Lieutenant Lecturer Ovidiu CRISTEA, PhD

CONFERENCE ROOM: EP - 26

1. HIGH-VOLTAGE MONITORING EQUIPMENT USING ACOUSTIC PROCESSING

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Abstract: *In the last decades, naval propulsion has developed in the high-voltage domain. This domain is represented here by 3.3kV, 6,6kV and 11,5kV. The electrical energy is supplied using these voltages to lower the currents for a big power demand. These voltages used for propulsion and reefers have the advantage of being more efficient than the conventional low voltages. The monitoring of the equipment that produces high-voltage energy is done with thermo-vision cameras and insulation resistance measurement. Our project proposes a different monitoring using acoustic holography. High-voltage equipment produces noise that can be identified using vibration and acoustic measurements. The high-voltage equipment onboard commercial ships emit noise from electromagnetic components in*

the medium at high frequency range. As noise sources, the power transformers, inductors, switchers etc. represent sources that can be investigated using acoustic holography and thus the noise produced by each of them can be determined. The noise from these components is in the 20Hz-20kHz frequency range, and sometimes over 20 kHz. Many of the noises produced by the equipment are in the audible domain and so they can be heard during functioning. One of the advantages of this technique is that it is a non-invasive technique. It uses a microphone array that is placed around the equipment and thus the noise emitted by the equipment is mapped. The technique is similar to the intensimetry method, but here is measured the sound pressure level instead of sound intensity level. Thus, the results can be correlated rapidly with the noise limits from the standards that are expressed in terms of SPL (Sound Pressure Level).

Key words: *High Voltage, monitoring system, simulation, Sound Pressure Level.*

2. REAL SHOOTING TRAINING TARGET AUTOMATED WITH ARDUINO

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Abstract: *The Word is facing with tremendous changes in the geopolitical relationship, which act like a cold war and put pressure on anybody, especially on military personnel. Also, there are new types of asymmetrical conflicts which include terrorist acts. As the entire Word is changing and the threats are evolving, is necessary to improve the training facilities for military personnel. This paper propose a method to update a low caliber munition shooting training target using microprocessor's processing and vibration sensors. The main idea is to create a sophisticate training battle*

field for military personnel. The entire target will have capabilities to act by them-self, or coordinated by the instructor. The paper presents the automated part of the entire project. In order to achieve that we used a simple Arduino one board, a vibration sensor and a step-by-step electrical motor with its driver.
Key words: *Arduino, automated target, stepper motor, vibration sensor.*

3. WIND INFLUENCES ON A SOLAR CELL ENERGY OUTPUT

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Abstract: *Nowdays, the energy can be cataloged as a key problem because the fossil fuels are no longer a secure and cheap form of energy; that`s why the renewable tipes of energy must be implemented in our daily life in order to decrease the greenhouse effect resulted from using the different tipes of conventional fuels. At this moment, another important aspect that embraces the ideea of implementing the renewable forms of energy in a massive way is the problem of humanity health. A recent study revealed that one child from five is accusing respiratory problems due to the air pollution; fact wich is strict connected with the using of all the classic fuels. This article contains a numerical simulation of an independent naval system being powered with solar energy and how the wind influences the solar cell energy output.*
Key words: *Albedo, ambiental temperature, PVSyst, wind influence.*

4. LABVIEW SIMULATION OF A MATHEMATICAL MODEL FOR RAPID VARIATIONS OF AMBIENTAL CONDITIONS ON A PHOTOVOLTAIC CELL

Eng PhD student Mihai BALACEANU[1]
Lecturer Ovidiu CRISTEA[2]
Lecturer Nicolae BADARA[3]

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Abstract: *This article presents a mathematical model used to anticipate the module temperature which is based on real parameters measurements of the photovoltaic ensemble such as: ambient temperature, wind velocity, wind direction and relative humidity. The adopted mathematical model is capable to generate the temperature of the photovoltaic model using only three of the input data. The results obtained after running the chosen mathematical model in the LabView simulation program shows that the cell generated current and power are proportionally rising with the wind velocity. Also, the variation of the output power produced by the photovoltaic cell between the extreme values of the wind velocity is 0.021W and also, the higher current is produced, as it was accepted, at the highest wind velocity.*
Key words: *LabView, mathematical model, wind influence, wind velocity*

5. THE PROCESSING ELEMENTS BY DRAWING

Aurelia CHIOIBAS[1]

[1] Lecturer PhD Eng., Dep. IMAN, "Mircea cel Batran" Naval Academy, 1 Fulgerului Street, chioibasaura@yahoo.com

Abstract: *This paper is an overview of the technological system of processing and factors that characterize the drawing, because the piece is the result of interactions between all of them.*
Key words: *press, blank, die, operator, drawing process.*

6. THE INTERACTIONS BETWEEN DRAWING PROCESSING ELEMENTS AND THEIR INFLUENCE ON THE QUALITY PARTS

Aurelia CHIOIBAS[1]

[1] Lecturer PhD Eng., Dep. IMAN, "Mircea cel Batran" Naval Academy, 1 Fulgerului Street, chioibasaura@yahoo.com

Abstract: *In this paper is present the influences between the components of technological drawing system and elements that make up the process drawing, which is reflected in the quality of parts obtained.*

Key words: *drawing process, drawing technological system, quality of drawing part*

7. CRYSTALLINE STRUCTURE AND FATIGUE PHENOMENON OBSERVATIONS

Dumitru DASCALU[1]

[1] "Mircea cel Batran" Naval Academy, Constanta, Romania

Abstract: *The actual work presents some observations regarding the generation of crystalline structure by crystalline germination and the way in which the structure decays at the crystals periphery. The structure at the crystals periphery generates an upper structure which definitely influences the properties of materials. This work analyses the way this upper structure influences the behavior of the materials crystalline structure subjected to fatigue.*
Key words: *crystalline structure, upper structure, fatigue of materials, inter-granular breaking.*

8. EVALUATION OF DEFORMATION OF CONTACTS BETWEEN ROLLING BODIES AND THE WAYS OF ROLLING BEARINGS

Dumitru DASCĂLU[1]
Draguţa DASCĂLU[2]

[1] "Mircea cel Batran" Naval Academy, Constanta, Romania
[2] "Nicolae Iorga" School, Constanta, Romania

Abstract: *The paper presents aspects of the relative movement of the cinematic ways of rolling bearings and rolling bodies, how to generate waves of global deformation response during contact between them. The paper presents the destructive effects of the wave of global deformation response over the quality of the surfaces of these components.*
Key words: *bearings, surface contact, deformation, degradation*

9. HE'S HAMILTONIAN APPROACH FOR THE GENERALIZED DUFFING CONSERVATIVE OSCILLATOR

Dumitru DELEANU[1]

[1] Assoc. Professor, PhD Eng., General Engineering Sciences Department, Constanta Maritime University, 104, Mircea cel Batran Street, Constanta, Romania, e-mail adress: dumitrudeleanu @yahoo.com

Abstract: *The Duffing-like oscillators have been extensively applied to represent many physically systems especially in engineering sciences. Our paper is aimed to use the He's Hamiltonian approach (HA for short) for obtaining a simple analytical solution to the generalized Duffing conservative oscillator, where the restoring force is written as an odd polynomial of arbitrary degree.The HA provides also a fast and reliable estimation of frequency – amplitude relationship. Three illustrative particular cases, for which the closed-form solutions are available, are given to check the efectiveness of the HA and the accuracy of the obtained results. They correspond to the classic softening oscilator, to a simple pendulum mounted on a rotating rigid frame and to a cubic – septic Duffing oscillator, respectively. The analytial results are contrasted with their exact or numerical counterpartsand they reveal an excellent agreement for small amplitudes, acceptable discrepancies for medium amplitudes and high enough relative errors for large oscillation amplitudes, when the oscillator behaves unharmonically. For the simple case of the softening cubic oscillator, an improved approximation is derived too.*
Key words*: Duffing equation, Hamiltonian approach, approximate solution.*

10. STUDYING A TWO-DIMENSIONAL NONLINEAR MODEL FOR GALLOPING OF ICED CONDUCTORS BY A MODIFIED VARIATIONAL ITERATION METHOD

Dumitru DELEANU[1]

[1] Assoc. Professor, PhD Eng., General Engineering Sciences Department, Constanta Maritime University, 104, Mircea cel Batran Street, Constanta, Romania, e-mail adress: dumitrudeleanu @yahoo.com

Abstract: *Galloping is a self-excited aeroelastic oscillation of slender structures, such as high voltage overhead lines or tall buildings, characterized by large-amplitudes and low-frequencies. The movement of*

the excited structure develops commonly transverse to the wind but other translational or rotational motions have been observed on the field. In the paper, a two-dimensional weakly nonlinear model of an iced suspended cable, having as degrees-of-freedom the vertical plunge and the rotation around the elastic axis, is introduced. The sysem is excited by a uniform wind and susceptible to galloping. A modified variational iteration method is employed to obtain a system of four amplitude-frequency modulation equations that yields both the transient and the steady-state behaviors. The influence of wind speed on the initiation of galloping as well as on the amplitude of oscillation is analyzed in far-from resonance conditions. The theoretical results derived in the paper have been applied to a typical section model and the numerical results are contrasted with those provided by the direct integration of equations of motion.
***Key words**: Galloping, Two-dimensional model, Modified variational iteration method.*

11. ASPECTS TO THE STUDY OF FLOW DYNAMICS AND CAVITATIONS ON DUCT – TYPE SHIP DEVICES

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Iordan NOVAC[2]

[1] Eng., Constantza Maritime University
[2] Associate Professor Eng., Constantza Maritime University

***Abstract**: Contributions to the study of flow dynamics and cavitations on duct-type ship devices are engineering things studied today. Not only elements of the fluid mechanics, such as the fluid pressure, density, viscosity, speed and the hydrostatic equations are used for this study, but also the influence of the Reynolds and Mach numbers influencing the flow fluid are being studied. Some present studies regarding the current stage of the finite volumes method and nonlinear optimisation, including the mathematical foundations of numerical analysis of fluid dynamics best help for this. The CFX numerical analysis of models with and without wet duct and cavitation is being analysed by making a comparative study that includes the schemes mentioned above for speed, pressure and current lines.*
***Key words:** Geometric modelling, CFD –Computational Fluid Dynamics, Elements of fluids mechanics, Ship propellers hydrodynamics, Cavitation, Numerical optimisation of WED geometry.*

12. FORM DEVELOPMENT AND VALIDATION OF AN AUTONOMOUS UNDERWATER VEHICLE

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Mesut TANER[2]
Deniz ÜNSALAN[3]
Gökdeniz NEŞER[4]
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Abstract: *Engineering projects such as surveys for oil and natural gas resources, offshore structures, undersea pipelines, harbours, etc., require geomorphological, geological and geophysical as well oceanographic research both at the coastal and offshore areas. Such research is conducted by research vessels or by small craft equipped for the specific purposes, which require extensive labourship. This method of research causes high costs and may also involve threats to occupational safety and property due to the harsh weather conditions at sea. Furthermore, high precision measurements cannot always be performed during such seismic research. Thus, autonomous underwater vehicles (AUV) have been developed intensively in the last two decades. The objective of this study is to find the proper unmanned underwater surveying vehicle to conduct research on the geomorphological, geological and geophysical aspects of the structure of the sea bottom and on the Earth's mantle beneath the seas as well oceanographic opinions. Therefore, this article is aimed to provide a comprehensive understanding about computational fluid dynamics (CFD) analysis of a SWATH ship model and the validation of the results obtained in these analyses with those of the experiments of this ship model performed by Begovic et al, 2015. After successful conformity of the simulations carried out using the commercial software ANSYS/FLUENT, the developed models of an immature goose-beaked whale (ziphius cavirostris) and an immature sperm whale (physeter macrocephalus) as well three torpedo shaped AUV models with the same length of 6,0 m were analysed in the same manner and the results obtained were compared to each other.*
Key words: *Form development, autonomous underwater vehicle, CFD analysis, marine science.*

13. CONSIDERATIONS ON THE SHIP'S HYDRODYNAMIC FIELD

Gheorghe ICHIMOAEI[1]
Octavian TĂRĂBUȚĂ[2]
Cătălin CLINCI[3]
Beazit ALI[4]

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[4] Professor PhD, "Mircea cel Batran" Naval Academy

Abstract: *In this paper we studied the possibility to compute ship's hydrodynamic field. The level of ship's hydrodynamic field is depending by ship's overall dimensions and speed. The hydrodynamic field values are important, because are used to determining the speed with which you can navigate safe in an area where depth and sensitivity mines are known.*
Key words*: hydrodynamic field, marine mines, explosion, sources, flows.*

14. ELECTRICAL PROPULSION ANALYSIS FOR A PASSENGER SHIP

Dumitru IORGULESCU[1]
Gheorghe SAMOILESCU[2]
Florian TĂNASE[3]
Nicolae BĂDĂRĂ[4]
Raluca MATEȘ-APOSTOL[5]

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Abstract: *The electrical energy obtained onboard a ship is split up on the engine room on different electrical control panels. The main electrical control panels are usually divided into two, three or four sections, for a better operation of the ship. According to rules and regulations for electrical propulsion, an electrical control panel can take the unfavorable consequences in case of one section breaks down due to a fault. To avoid the usage of an expensive electrical installation, the electrical energy command system is to be split into three or four electrical control panels. In electrical propulsion regime, the electrical control panels are interconnected,*

resulting into a better flexibility for electrical energy generation mechanism configuration. Losing propulsion or energy maintaining station in one part of the system is going to have an impact on the remaining installations through the control system. The remaining electrical energy must maintain ship's maneuverability, stability and buoyancy. Therefore, we have analyzed the electrical propulsion components, the sequential control of propulsion engines and their limitations.

key words: *electric propulsion, electric engine, electronic apparatus, maritime electro-energetic system*

15. COMBUSTION BEHAVIOR OF FUEL WATER EMULSIONS USED IN NAVAL ENERGY SYSTEMS

Corneliu MOROIANU[1]

[1] PhD, "Mircea cel Bătrân" Naval Academy, Constanta, Email address: cmoroianu2000@yahoo.com

Abstract: *Reducing of emissions from burning fossil fuels in marine power systems is a goal by virtue of which we use different methods. The paper presents numerical calculation of the combustion of the marine fuel RMF 25 executed by a program designed by using MathCAD mathematical interpreter. I was interested in the concentrations of CO, NO_x, SO_2 and CO_2 while decreasing the combustion temperature to its emulsification with various percentages of water.*

Key words*: fuel combustion, analytical modelling, emulsions, water emulsions.*

16. THE DYNAMIC DESIGN OF THE MARIN ENGINES

Corneliu MOROIANU[1]

[1] PhD, "Mircea cel Bătrân" Naval Academy, Constanta, Email address: cmoroianu2000@yahoo.com

Abstract: *The study of the stresses in the drive mechanism takes into account the determination of forces and moments loading the drive mechanism. Depending on the physical phenomenon inducing the forces in the drive mechanism, we have: pressure forces, inertia forces, friction forces and gravity forces. Practically speaking, the determination of the pressure*

and inertia forces presents a special importance and the other two forces are much smaller. This paper presents a numerical method for determining the stresses by means of the E-FORT program with MATHCAD as a mathematical interpreter.
Key words: *drive mechanism, stress, pressure, inertia, friction and gravity forces.*

17. 3C-SiC: A Promising Material for GHz resonators in Out-of-Plane Resonance Mode

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Abstract: *Cubic silicon carbide (3C-SiC) has excellent mechanical and electrical properties that make it very promising material/candidate to replace conventional silicon (Si), in many MEMS/NEMS applicationsincluding microresonators (e.g. microactuators and microsensors). Attaining high frequency resonators will widen the application of MEMS in signals filtering and mixing besides improving the accuracy of microsensorsers. This paper presents promising results of high resonance frequencies at the out-of-plane mode using 3C-SiC microstructures. The SiC microbridges were successfully actuated up to 2.4 MHz. The paper claims that highest out of plane resonance (of 2.4 GHz) can be achieved with reducing the same 3C-SiC resonator to nanoscale size and considering higher modes of actuation.*
Key words*: microactuators, microsensors, SiC, high frequency, in-plane vibration, RF MEMS*

18. SIMULATION OF MECHANICAL STRESS SUPPORTED BY MARINE DIESEL ENGINE'S FIXED PARTS

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Abstract: *This paper studies the stresses occuring in large fixed parts of marine diesel engine because of thermal processes from inside the combustion chamber.The MAN B&W K80 MC-C engine is aimed, an engine still widely used in the world fleet of merchant ships, and stresses values are obtained through dedicated computer simulatonsoftware.*
Key words: *marine engine, diesel, simulation, bedplate, frame box*

19. ASSESSMENT ON LECTURE HALL ACOUSTICS IN „MIRCEA CEL BATRAN "NAVAL ACADEMY

Tiberiu PAZARA[1]
Ovidiu RADU[2]
Nicolae BADARA[3]
Georgica SLAMNOIU[4]
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Abstract: *This paper represents an evaluation of the current state regarding the acoustics of lecture halls in the Naval Academy „Mircea cel Batran". The improvement of teaching conditions, among other things, means rooms with very good acoustics from teaching point of view. This improvement will reduce the vocal effort of teachers and will increase the level of understanding among the students/audience. For this purpose, lecture hall named AM1 was investigated regarding the Background Noise Level and the Noise Level, regarding the Reverberation Time (RT), Speech Transmission Index (STI). The measurement values were compared with the values obtained through simulations made with software dedicated studying*

sound propagation in rooms. The results and conclusions are part of the propositions that the authors make to improve the education act in the Naval Academy.

Key words: *acoustics, lecture hall, reverberation time, noise level, speech transmission index*

20. PROSPECTS OF BIO-FUELS IN MARINE SHIPPING

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Abstract: *For transporting goods maritime shipping is world's most carbon efficient form – much more efficient than air or road transport [1]. International regulatory bodies such as the International Maritime Organization (IMO) have issued rules and regulations (e.g. the MARPOL agreement) to reduce engine exhaust emissions (sulphur, NOx and particulate) from ships [2]. Such regulations are also issued by National Environment agencies of many countries. There is need to decrease the carbon intensity of shipping propulsion considering the growing population and international trade. To meet these new regulations, the shipping companies need to install expensive exhaust post-treatment equipment. Or they need to switch to low sulphur diesel or alternate fuels with properties that reduce emissions below the set limits. The cargo ships use almost 90% of the world's marine fuel. The large cargo-carrying ships consume heavy fuel oil (HFO) which is low-quality low-priced residual fuel. This fuel is high in sulphur and forms a large part (77%) of the marine fuel consumption. Current requirement is to use low-sulfur fuel such as some liquid biofuels and fossil fuels [3]. Biofuels are liquid or gaseous fuels and can be produced from many abundant types of biomass (plant or animal). To produce bio-fuels there are a few well established routes [4]:*

- *Extraction of vegetable oils.*
- *Fermentation of sugar or starch to alcohol.*

For marine use biodiesel, fatty acid methyl ester, algae fuels, methanol etc. can be used as liquid biofuels. Natural gas and propane (LPG) are the gaseous fuels for available as biofuels for marine use. The gaseous fuels are very low in sulphur content and during their combustion CO2, NOx, PM are also reduced. This paper attempts to review the use of both liquid and gaseous fuels for marine applications. The data will be collected from prominent reports and related publications.

21. ASPECTS REGARDING THE DIMENSIONING OF ELECTRICAL INSTALLATIONS USING POWER ENGINEERING SOFTWARE

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Nicolae JULA[2]
Victor BĂDĂNĂU[3]

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Abstract: *On T22 frigates, the quality of the oil used in gearboxes is provided by centrifugal separators. In the operation cycle of those separators, it is necessary to preheat the oil in limited conditions of temperature and flow. Currently, the preheating process is designed to be carried out by air preheaters. The paper shows the technical solution in order to replace air preheating with electrical heating. Also it provides a comparison between the direct computation results with the Power Analytics' DesignBase Software calculations done for the studied case.*

22. TEST OF THE DETECTION CAPABILITIES OF A SIDE SCANNING SONAR MOUNTED ON AN AUV

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Ovidiu RADU[2]
Valerică ROȘCA[3]
Roxana-Gabriela DAMIAN[4]
George SURDU[5]
Camelia PASCU[6]
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Abstract: *Autonomous underwater vehicle (AUV) a.k.a. underwater drones are subsea vehicles which operate in the underwater environment independently of direct human input. There is a growing interest in underwater data collection by using autonomous underwater vehicles within the oceanographic research community. In this paper, the Iver 2 AUV is examined to accomplish accurate side-scan data while executing well planned missions. Therefore, this papers goal is to collect and process underwater data using the Iver2 AUV configured by the Research Center for Navy and built by Ocean Server during the underwater and surface missions.*
Key words: *AUV (autonomous underwater vehicle), side-scan sonar, detection probability.*

23. CAN WE INTRODUCE THE NOTION OF OPTIMAL DESIGN IN RATES OF MACHINE?

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Abstract: *Optimization is a process to decide on the best solution of two or more possible. In the field of machine optimization process consists of establishing a algorithms (design method) in which starts at tasks (force and moments exterior) that loads the song, select a group of materials that might be used (for that known resistance characteristics) and add restrictions (which limits certain solutions or use of certain materials). In addition, consider a function of purpose that must be maximized or minimized (for example: minimal use of materials, minimal cost price, high efficiency, durability, etc.). With this set of data, restrictions and functions of purpose creates an "operational model" that leads to "optimal solution" - optimized proper purpose.*
Key words: *process optimization, algorithm, mechanical design*

24. A WAVE ENERGY CONVERSION SCHEME BASED ON ROLL PARAMETRIC EXCITATION OF A FIVE-HULLED TRIMARAN BARGE

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Abstract: *As a method of obtaining power from the gravity waves that are abundant in seas, a "point-absorber" type wave energy extraction device, based on nonlinear Hill/Mathieu equation has been conceived. A special barge type device, having five hulls symmetrical both with respect to the centerline and to the waterline, and moored in a position to receive waves from the beam and thus forced to roll is the basis of this approach. At small angles of roll, the barge can be analyzed as a wall-sided hull. However, above a certain angle of roll, the hull shall become a trimaran, causing the moment of inertia and the metacentric radius and metacentric height increase rapidly. This shall induce a quadratic term to the righting arm term of the uncoupled equation of roll. Since the roll equation is periodic, by the analysis that shall be outlined in the following paper, the roll equation is a form of the Mathieu equation, causing a parametric roll phenomenon between two extreme angles. The energy of the waves as transferred to the rolling motion can be extracted by a pendulous mechanism that can be used to get electrical energy to be transmitted ashore by cables. The energy extracted shall be accounted as a term of the damping term of the equation of roll. The concept is examined by the numerical solution of the roll equation. An estimate of power from a typical wave at the same order of the barge's dimensions is made.*

Key words: *Parametric resonance, Mathieu equation, wave energy, rolling motion.*

25. MESHING AND 3D MODELLING FOR SHIP CONSTRUCTION ELEMENTS

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[4] Associate Professor, PhD. Eng., "Mircea cel Batran" Naval Academy, Constanta, Romania, george.novac@anmb.ro

Abstract: *All construction elements are subjected to immense forces during ship operation. The presented study is made using different mesh for high stress area on the transverse element presented. The paper presents static loading analysis for the transverse beam model based on Ansys software results.*
Key words: *transverse beam, statical loads, ansys software, meshing.*

26. DATA SOLUTION FOR TURBINE SAFETY

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Abstract: *Many efforts have been made in turbine safety regarding static and dynamic loads. Taking into account that turbines operate in various*

ranges of speeds and support a wide spectrum of engines, we will consider for Ansys analysis a simplified turbine model. The paper presents modal analysis for the turbine model based on Ansys software results.
Key words: *turbine, modal, ansys software, meshing.*

III. FUNDAMENTAL AND COMPLEMENTARY SCIENCES

SECTION COMMITTEE:
Associate professor Delia LUNGU, PhD
Associate professor Alina BALAGIU, PhD
Lecturer Carmen ASTRATINEI, PhD
Lecturer Camelia ALIBEC, PhD
Lecturer Andrei BĂUTU, PhD
Lecturer Dr. Dan LASCU, PhD
Lecturer Adriana SPORIŞ, PhD

CONFERENCE ROOM: CI p41 FOR FOREIGN LANGUAGES
CONFERENCE ROOM: L121 FOR FUNDAMENTAL SCIENCES

1. THE ROLE-PLAY AS A METHOD OF EVALUATION OF THE KNOWLEDGE IN THE HISTORY IN THE ACADEMIC EDUCATIONAL SYSTEM

Carmen ALEXANDRACHE[1]

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Abstract: *The Role-Play is used as a learning method, but in the history lessons it is not frequently than in the other formal activities. Studying the past and actually realities, students could simulate a situation and learn about it. In this way, they find more details and understand better the scientific contents of the history. This paper proposes to use the Role-Play Method from the evaluating perspective. We have developed a educational research that allowed to apply this method as a method of the alternative/ complementary evaluation. The results of the research demonstrate that the Role-Play Method is a pleasant method that share the level of student's knowledge and a stimulation method to learn better. Using this method the responsibility of the student for the proposal activity and his individual preparation are increased.*
Key words: *history, competences, education, evaluation.*

2. ONLINE RESOURCES TO CREATE NEW LEARNING MEANS-THE CROSSWORDS

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Alina BARBU[2]

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[2] Lecturer, Maritime University/Constanţa

Abstract: *The digitalized world we live and work in makes compulsory for us, teachers, to develop the ability to provide new learning materials for our students. We do not have to search deep, the sites that can offer their support in making crosswords are numerous and easy to access. No matter if we choose to use the fill-in crossword to review some vocabulary aspects or to use the straight or quick crossword to make sure the information we transmitted was acquired, solving a crossword is an interactive and fun way of learning. It is our call how we give the definitions, how relevant is the information we base the crossword on, what we want to enhance by solving the crossword.*
Key words: *sites, learning, fill-in crossword, straight crossword, acquisition, vocabulary.*

3. CRYPTOLOGY AND INFORMATION SECURITY

Claudiu ARAMA[1]
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Abstract: *Cryptography has emerged as a security guarantee, because the risk of security, like any other risks otherwise need to be covered. When the object is manipulated information only, cryptography is one of the few guarantees demonstrable. So its role is to provide security guarantees to the risks of information. In an era where information is essential, its security has become a primary concern. This is because the information is worthless as long as its security attributes are not insured. In high, security means protection against a potential threat and threats in relation to information can range from simple alteration to its inadvertent access by unauthorized persons or destroy them. Security is not a product that can be bought to*

ensure total protection. Security is an accumulation of points for updates constantly, whether we're talking about software or human component. At the same time safety culture will always play the leading role. It should be understood that cryptography is an essential piece in security but not the only one.
Key words: *cryptography, information, security, risk.*

4. BIOMETRIC SYSTEMS SECURITY

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Abstract: *Biometrics will play a major role in different industries, from medicine, science, robotics, defence and many areas of enterprise business. Promoting the use of biometrics for security today is a measure to minimize actions on identity theft. A phone number and address are enough to begin the process of identity theft. It is a predominant concern for many companies and individuals, particularly given the rapid growth in Internet use for business. Implementing robust security technologies involves advanced authentication, and biometric systems fall into this category. They are used to recognize individuals and regulate access to information, services, physical spaces and many other rights and benefits. Although lately, there is an increase of their use, there are still questions about their usability, effectiveness, social impact and effects on privacy. Like any new technology, even if it offers extra security, it presents some issues by confronting with a series of vulnerabilities which can affect the implementation of an acceptable security level.*
Key words: biometric, security, authentication

5. ON-LINE SECOND YEAR DECK MARITIME ENGLISH-COURSE EVALUATION

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Abstract: *First, the importance of Maritime English in the context of globalization leading to a growing number of multicultural crews on board ships will be discussed. Then, the need for a common communication language on board ship stipulated by several IMO conventions as a result of various maritime incidents caused by communication breakdowns or misinterpretations will be also approached. Afterwards, SMCP (Standard Marine Communication Phrases), which has become mandatory for all seafarers, will be mentioned as well as the task of MET (Maritime Education and Training) institutions which are to thoroughly teach the marine standard vocabulary through properly designed courses. Eventually, the paper proposes to present the second year deck on line course: topic of each unit, structure per unit, knowledge and final unit tests. The course evaluation, which was both quantitative (questionnaire) and qualitative (the learners` free comments), will be presented in graph form accompanied by commentaries.*

6. WORDS AND SYMBOLS IN ELECTRICAL MARINE TERMINOLOGY TEACHING (A CASE STUDY)

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Abstract: *The Case study started from the necessity of teaching the electrical marine terminology as quickly as possible. The electrical and electronic terminology is not very resourceful; the process of teaching it can be sometimes slow and dull and many students lose interest when they still have long to wait until going on voyages, where they are supposed to understand and use the terminology. The case study involved two groups of students studying English electrical terminology. One group was taught using original texts that they were encouraged to read and translate, do vocabulary tasks or exercises in order to understand and learn the vocabulary. The other group was taught using the visual prompts, mainly symbols of the electrical objects and systems that can be found on board ships. The differences in terminology acquisition between the two groups*

and the students' reactions towards the two methods of teaching are presented in this case study.
Key words: *electrical terminology, symbols, ESP, teaching.*

7. ACQUIRING PROFICIENCY IN USING NAVAL ENGLISH TERMINOLOGY: STRATEGIZING THE PROCESS OF TEACHING AND LEARNING ESP VOCABULARY FOR THE NAVAL ACADEMY MILITARY STUDENTS

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Abstract: *The present paper reports on the findings of the research project entitled "Contextualizing Naval Lexical Content: A Research into the Ways and Means of Facilitating the Acquisition of Specialized Terminology by Naval Students", conducted at "Mircea cel Batran" Naval Academy, Constanta, between 2015 and 2016. The project aimed at identifying a series of efficient teaching strategies, means and materials which could be proven through piloting to enhance our naval students' retention, internalization and generative use of specialized vocabulary in work-related communication. The main phases of the research project included designing a set of surveying instruments in order to explore the present teaching and learning situation with its strengths, weaknesses and needs, followed by the production and piloting of a collection of teaching materials and finally the interpretation of the teacher and student feedback data in view to future material design. The research hypothesis was that the process of acquiring specialized vocabulary and developing general communicative competences might be optimized through an explicit and deliberate connection made between the lexical content and the assigned learning tasks, on the one hand, and the linguistic requirements of the occupational context, on the other. The underlying research assumption on which this project was based was that any ESP course needs to reflect the learners' profile and linguistic needs as much as possible. The more these needs are met and reflected in*

the choice of materials and procedures, the more successful the teaching and learning process is. In addition, it was anticipated and verified in the piloting stage, that the more aware of explicit learning strategies the learners were, the more efficient they were in their leaning efforts.
Key words: *ESP vocabulary teaching and learning, material design.*

8. MULTISENSORY LEARNING IN MOTOR ACTIVITIES

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Abstract: *The topics of motor learning has incorporated in the last years information emerging from neuroscience area, explaining the mechanisms wherein human brain evolves, learns and operates.Even at early stages, in perceptual processing, areas that have been considered as sensory-specificare now viewed as responsible for multisensory modulation, activations and connectivity. Multisensory learning expresses a process of behavioral change, possibly by internalization and integration of sensory stimuli that lead to the formation of perceptions and perceptual-motor responses. Whether it is about expression sports or sports in which the subject competes only against space and time, sensory pathways are essential to know and understand the external conditions or the athlete's body condition at a given moment. This sensory information, known as feedback in the specialized language, is directly related to the movements performed, having as a substrate the athlete's sensations and perceptions. We think that the issue of multisensory stimulation represents an area insufficiently explored by the specialists in motor activities, but providing the opportunity to maximize the individual's behavior by using different learning styles.*
Key words: *multisensory learning, motor activity, learning styles.*

9. HIGH-IMPACT, LOW-FREQUENCY EVENTS FROM OUTER SPACE AND IMPACT ON MILITARY OPERATIONS

Ulpia Elena BOTEZATU[1]

[1] Romanian Space Agency

Abstract: *The High Impact, Low Frequency (HILF) events from outer space such as space weather, space debris or impact with objects in space have an important impact on the well-functioning of ground infrastructure. Especially for the military operations, these events might render entire systems unavailable with vast implications for security and defense. This paper based on the SCIPRO project at the Romanian Space Agency attempts to offer an overview of the close interdependencies between space technologies and ground infrastructures and military operations. Moreover, the paper attempts to formulate several recommendations for better preparedness and for building more resilient systems to threats from outer space.*
Key words*: Critical space infrastructure, space situational awareness, NATO Space.*

10. RHETORICAL DEVICES IN IDEOLOGICAL DISCOURSE

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Abstract: *Rhetorical devices are meant to enhance the power of a discourse, but, more than this, they often reveal certain ideological aspects that inform and guide the discourse. Metaphors speak to one's conceptual framework, analogies shape the way one's ideas relate to other existing ideologies, while hypothetical constructions build images of what society could be if alternative ideologies were in place. The aim of the present paper is to theorize on the role these rhetorical devices play in ideological discourses relying on real-life examples.*
Key words: *rhetorical device, metaphor, analogy, hypothetical constructions, ideology.*

11. ROMANIAN AND ITALIAN MARITIME LANGUAGE – A SHORT HISTORICAL PERSPECTIVE

Ozana CIOCA[1]

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Abstract: *This paper presents the historical background in which the maritime language has developed over the years in Romania and in Italy. Therefore, the focus is on the geo-political context that led to the development of maritime language as part of the technical jargon of linguistics shaped by a professional category, i.e. the sailors.*
Key words: *Romanian and Italian maritime serial publications.*

12. GENERAL CONSIDERATIONS REGARDING THE ROMANIAN AND ITALIAN MARITIME SERIAL PUBLICATIONS – A REPRESENTATION OF THE MARITIME LANGUAGE AND CULTURE

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Abstract: *This paper is a short presentation of the maritime written press as a whole and it's role in the life of a particular community's life and not only, but also as an integral part of the journalistic discourse.*
Key words: *maritime language, historical background, Italian, Romanian*.

13. THE GOOD AND THE BAD OF THE CORPUS-BASED APPROACH (OR DATA-DRIVEN LEARNING) TO ESP TEACHING

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Abstract*: This paper tackles a didactic method with a rising popularity among those involved, especially in English for Specific Purposes teaching. First proposed to the world in the 1980s by Tim Johns, it gained even more notoriety with its inventor's death in the late 2000s, a notoriety also helped by the technological advancement that would considerably ease the application of this method. With its specific terminology which includes terms such as corpus/corpora, data-driven, computer-assisted or concordance/concordancer, the data-driven learning or corpus-based approach to teaching a foreign language is especially useful to ESP*

teachers, the various activity domains of their learners making this method all the more useful, as corpora has specific importance in this field. Although heavily discussed and promoted, the method is still largely either misapplied or misunderstood by teachers and, apart from its obvious advantages, it has some important disadvantages which make it harder to use. This paper will present some of these issues in an attempt to make the method more familiar and applicable to the ESP teaching field. It will also emphasize some of the issues this problem may have in its application in Romanian contexts.

***Key words**: data driven learning, corpus, ESP, concordance.*

14. EVALUATION OF STUDENT'S PROFESSIONAL PERFORMANCE BASED ON THEIR SPECIALIZATION SKILLS – A CASE STUDY

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***Abstract:** The present study aims to analyze the significant differences in the level of professional and transversal competences based on students 'self-perception, on peer-reviewing and on the evaluation made by an expert teacher specialized in Navigation, Maritime and River Transport. A number of questionnaires on professional and transversal competences specific to the specialization Navigation, Maritime and River Transport, was administered to a number of 119 students (N=119 students). This provided us with a database for our case study, which is part of a larger project, called "Facilitating the insertion into the labor market of the future navy graduates." As a result of processing, analysis and interpretation of data and statistical inference, by analysis of variance, we have found the existence of an effect on the analyzed competence, dependent on the type of evaluation. Measuring the effect caused by the variable "type of assessment" (self-evaluation, peer evaluation, expert teacher evaluation) on the „investigated dimension" (professional and transversal competency), expresses significant variations only in the expert assessments, while between self-assessment and peer review assessment there are no significant differences, statistically speaking. Within this context, we intend to psychologically explore the dynamics of this type of perception*

ofcompetences in the specialization field. This will lead to forming and strengthening of students' professional identity and vocational route.
Key words: *perception of competences, vocational route, significant variations.*

15. THE MEDIA CULTURE IN THE AGE OF GLOBALIZATION

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Abstract: *The paper the media culture in the era of globalization shows how communication has evolved, as has been reflected in the Romanian media and how Romanian press has globalized its communication. The concept of new media is analyzed and submitted through the journalist today, through the evolution of the web, through the diversification of communication by adapting to the digital space. The digital natives are the subject of our interest in this paper, because they are the engine and support of the new media evolution. Our approach shows how social media and blogs born new disciplines to be studied in the faculties of communication, and in terms of new media's direction of movement, we emphasize how the digitization of the new media and the adaptation of the lifecycle to the new perspectives of evolution, everything we do is to constantly adjust our virtual image and update our social selves. The habits of information and the media consumption are closely linked to our availability to be connected again.*
Kew words: *media culture, new media, social media, globalization, journalist.*

16. INSIDERTHREAT DETECTION AND MITIGATION TECHNIQUES

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Abstract: *Most of the organizations these days are focusing on building their security program in order to stop malicious outsiders from affecting the confidentiality, integrity and availability of data. Inthis process, organizations are investing large sums of money and a lot of man hours. Although security controls like antivirus, proxies, firewalls, etc. are efficient to stop most of the attacks carried out by external perpetrators, they can be rendered useless when an attack is carried out by a trusted internal resource. The threat that insiders pose to businesses, institutions and governmental organizations continues to be of great concern. Recent industry surveys and academic literature provide great evidence thatshows the significance and the impact that this threat can pose. This paper will discuss the main factors that can help an organization to improve its security to protect against internal attacks.*

17. INISMO: A NEW VISUAL AVANT-GARDE

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Abstract*: Inismo is a new international artistic movement, defined as 'avant-garde'.The link between Inismo and the avant-garde adventure at the beginning of the 20th century is obvious and not limited to the name of the movement, to its manifests. The work domain of Inist artists knows no limits or barriers; art is not categorised in genres anymore but contains operational domains: videoinipoetry, sound poetry, painting, sculpture, and literature with multimedia influences.One of the declared objectives of Inismo is that of creating art which would not know the issue of the invariably debatable translation, linguistic barriers, or the passing of time.*
Key words: *visual art, avant-garde, Inismo.*

18. EARLY IDENTIFICATION OF CHILDREN WITH SPECIAL EDUCATIONAL NEEDS

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Abstract: *Early identification of children with special needs is very important activity through which can be realized prevent them or to ascertain at the outset negatives that can more easily be repaired than when the problem is already unmanageable. Before proceeding to use one or the other winning strategy, we must surely recognize children with special educational needs. These deficits needs can be in training or behavior. When it is suspected that a child has special educational problems, check its average intelligence - decreases in psychological processes involved in learning; discrepancy between ability and achievement; achievements attained through effort or systematically support. In terms of childhood and kindergarten this can be done through observations from teachers about the presence or not of indicators analyzed in the publication.*
Key words: *early identification, children with special needs, indicators, analyze, childhood.*

19. PRINCIPLES OF TRAINING IN LINE WITH THE NEW THINKING AND ACTION

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Abstract: *Education of the Industrial Age, which gave knowledge needed to become a good worker in a specific occupation, turning students into standard products conveying educational production. Now learning through interaction atmosphere born of ingenuity and spontaneity that promote intuition and improvisation as valuable expressions of individuality and creativity. To construct successful learning strategies, it is necessary to know the context of social development. Scrutinizing social processes is more urgent today precisely in time and change the paradigm industrial age inherited from the information. The revolution that was born of the merger of computerization, means of communication and the media is the most powerful force shaping the world today. The new moments are manifested as the ability of man and his "smart innings," such as computer and communication technologies. The object of this publication are the*

characteristics of postmodern thinking, knowledge and behaviors that should guide when inventing models of education now, at the beginning of the XXI century.

Key words: *Principles, thinking, behavior, training, computer and communication technologies.*

20. THE SPECIFIC CHARACTER OF THE HYDROGRAPHIC BASINS OF VALCEA SUBCARPATHIANS

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Abstract*: The natural, renewable, vulnerable and limited source is represented by water which is an indispensable element for man and for the society, but also the determining factor in maintaining the ecological balance, so it must be protected, treated and guarded accordingly. The waters are part of the state public domain. The preservation, protection and improvement of the aquatic environment, in accordance with the conditions of a sustainable use of water resources are based on the principles of precaution, prevention, to avoid damage at source and the polluter-pays principle. The water resources within the Territory of Valcea County are made up of resources of surface water and resources of underground water. All of these provide both the water supply for the population and the industrial and agricultural needs*

Keywords*: water catchment area, runoff, flow, Storage Lake, indices.*

21. ANTHROPIC PRESSURE ON THE ENVIRONMENT AND ITS CONSEQUENCES IN VALCEA SUB- CARPATHIANS

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***Abstract**: Anthropogenic impact on the environment has generated over time a wide range of effects some of which are irreversible. Aggregated and diversified over time, these effects led to major changes in the balance of environmental natural components. Thus, deforestation, irrational grazing, exploitation of underground resources are the main reasons that determined the expansion of fragile geo systems ,biodiversity loss ,changes in the hydrological regime, top climate diversity, intensification of current geomorphological processes. There are many major causes of environmental degradation, acting separately or in a continuous interdependence with human activity. The natural environment must be preserved and protected in a conscious way, to avoid disparities and its effects on human health.*
***Key words**: Anthropogenic impact, Valcea Sub – Carpathians.*

22. CENTRALIZING APPLICATION CRASH INFORMATION IN SDLC

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***Abstract:** During the testing phase in the Software Development Lifecycle of software applications, implemented safeguards may not catch and treat all possible errors due to various deployment scenarios. When a crash occurs on a client's computer it is more difficult to identify the cause without a proper automated crash reporting framework. Modern operating systems have built-in mechanisms for error reporting but there are also third party cross-platform libraries. With the help of such tools and a centralization system it is possible to implement an efficient problem analysis procedure, when the software runs on a client's computer.*
***Key words:** error reporting, crash dump, SDLC.*

23. FUTURE DIRECTIONS IN CLOUD COMPUTING ENCRYPTION TECHNOLOGIES

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Abstract: *From searchable to fully homomorphic encryption, this paper aims to provide an overview on the current and future developments in cloud encryption technologies. Advances in computation on encrypted data have led to new commercial services and there is an active ongoing research to further improve these new encryption techniques, while changing the industry.*
Key words: *Cloud, Encryption, Future developments.*

24. CURRENT SELECTION PROCEDURES IN THE NAVAL PENTATHLON

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Abstract*: This paper presents the concepts of selection in sport for the lot of national naval pentathlon. Its necessary application in practice the following criteria: medical and biological, somatic-physiological, biochemical, motive and psychological. The selection at the lot of national naval pentathlon is carried out at athletes with the ages between 20 -25 years and with a certain specialization (athletics, swimming and shooting).*
Key words*: Medical and biological criteria, physiological, biochemical.*

25. CULTURAL OMNIVORISM AND UNIVORISM. AXIOLOGICAL LANDMARKS FOR A CULTURAL SOCIOLOGY

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Abstract: *This paper aims to examine the concepts of cultural omnivorism and cultural univorism in the context of understanding the idea of "cultural mobility" determined by current socio-political phenomena. Considering that the current cultural consumption is already ostensibly reported to the concept of diversity, this mechanism determines certain power relations that legitimate the cultural values. The eclecticism and cultural cosmopolitanism fulfill an important role regarding this legitimacy. In this context, the problem facing the consumer of culture is that of determining a pattern of overall consumption, which represents a satisfactory way towards its goals of life and to his concerns and to legitimize his own practice, whether it undermine or no other social practices. We are thus witnessing to the birth of a symbolic field that functions as a cultural ecosystem. In this interpretation, the present study aims to identify the characteristics of cultural ecosystem and practices of cultural legitimacy in order to understand the mechanism of legitimacy of the cultural patterns.*
Key words: *omnivorism, univorism, values, cultural legitimacy, cultural ecosystem*.

26. THE ROLE OF MARITIME ENGLISH IN THE CURRENT GEO-POLITICAL CONTEXT

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Abstract: *For the present article, I propose to analyse some of the implications of the 2010 Manila Amendments to the STCW Convention and Code, as well as their application and enforcement, and comment upon the changes made, while focusing on how these changes affect the average Romanian seafarer. Furthermore, due to the ever-changing Geo-Political context, especially considering Brexit and the United States' policies regarding immigration, as well as China's growing influence on the Asian markets, in the wake of President Trump's refusal to sign the Trans-Pacific Partnership, many industries have had to rethink their businesses and shipping may soon follow. Even though the role of the English language in the shipping industry does not seem to change for the moment, it is worth to*

take a moment to analyse the impact of these changes, in a world where English is not the official language of any of the countries of the European Union.

Key words: *Maritime English, Brexit, Trans-Pacific Partnership, communication.*

27. BODY POSITIONS, PROCEDURES AND PRINCIPLES IN TRX TRAINING – THEORETICAL CONSIDERATIONS

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Abstract: Problem statement: *We intend to make a short review about some theoretical considerations in TRX training.* ***The aim of the research:*** *The aim of this paper is to realize a brief theoretical description on the body's position, procedures and principles in TRX training. So, the goal of TRX training is also to develop the muscle strength and neuromuscular control, so that the purpose be represented by a better control and a more effective protection throughout the body during daily requests. The objective of introducing TRX exercises in the training is to provide a progressive muscle strain in the whole body to determine changes in neuromuscular system of trainees, to lead to the removal of shortcomings/limits caused by injury.* ***Conclusion:*** *All the papers we are reviewing have the following conclusions – TRX training.*

Key words: *TRX training, body positions, proceedings and principles, theoretical consideration.*

28. MOTIVES FOR ENROLLMENT IN SPORTS ACTIVITIES OF STUDENTS FROM PEDAGOGIC FACULTIES FROM BULGARIA AND MACEDONIA

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Abstract: *Sport activity can not exist for itself. It is always accompanied by certain motives - personal and social significance. Structural psychological standpoint between them there is no significant difference as they arise in the process of social development of society. The strength of their impact depends on the degree of awareness of the purpose of the students. The motives arise on the basis of needs and interests and are the driving force of human actions and activities. Leisure time students is important to be organized and recovered as intellectual self and the formation of a healthy lifestyle in order hardening and mental unloading. This is especially important for the students of teaching faculties as future teachers and educators. Our attention in this paper was directed toward the identification of activities that could full fill the leisure time of students at the Teaching Faculties in Universities Ruse, Sofia (Bulgaria) and Stip (Republic of Macedonia). The purpose of this paper is to identify and compare what motives of sports leisure activity guide the students in these faculties in different countries. The research was realized on a total sample of 408 students, particularly 114 students at the Faculty of Natural Sciences and Education, University "Angel Kanchev" in Ruse, 166 students at The Faculty for preschool and primary school education at Sofia University "St. Kliment Ohridski", Bulgaria, and 128 students at the Faculty of Educational Sciences at University "Goce Delcev" in Stip, Republic of Macedonia.*
Key words: *universities, motives, sports activies, students, leisure time, differences*

29. PHYSICAL ACTIVITY DURING LEISURE TIME OF STUDENTS FROM RUSE UNIVERSITY ANGEL KANCHEV AND SOFIA UNIVERSITY ST. KLIMENT OHRIDSKI, BULGARIA

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Abstract: *Health education and physical activity are essential for the prevention of health at any age. The formation of habits for a healthy lifestyle is a particular type of system life activities aimed at effective utilization of free time. The healthy lifestyle is achieved through personal health culture, values orientation and motivation of people. The participation of students in sports activity during leisure time is very important for personal physical and mental health.The aim of these paper is to examine and compare physical activity in leisure time of students from Ruse University Angel Kanchev and Sofia University St. Kliment Ohridski, Bulgaria. Main tasks: Development of questions from the survey; conducting the survey, processing and analysis of results; displaying the necessary practical conclusions. Organization and methodology: The survey was conducted during the school year 2015/2016. In Ruse University Angel Kanchev and Sofia University St. Kliment Ohridski, Bulgaria. The research was realized on a total sample of 280 students, particularly 114 students at the Faculty of Natural Sciences and Education at University "Angel Kanchev" in Ruse and 166 students at The Faculty for preschool and primary school education at Sofia University "St. Kliment Ohridski”, Bulgaria.*
Key words: *universities, physical activity, students, leisure time, differences.*

30. COMMON MISTAKES MADE BY ECONOMIC SCIENCES STUDENTS IN ENGLISH FORMAL WRITING

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Alina LEONTE[2]

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Abstract: *This study looks at some of the common mistakes made in formal writing by Romanian economic sciences students learning English as a second language. Based on 125 papers collected from students (59 first year finances and banking students, 26 third year marketing students and 40 first year management students), we have identified a series of common errors*

ranging from incorrect spelling to wrong word order and to the misuse of grammatical structures. The collection method was the writing of a short text on a given topic. Finances and banking students wrote a report starting from a chart, marketing students wrote a cover letter, while management students wrote a business email. Different topics were provided in order to correctly identify the common mistakes and to eliminate any errors due to the students' understanding of one specific topic. The study aims to identify the root cause of such issues and to propose possible solutions.
Key words: *common mistakes, formal writing, ESP, ESL.*

31. MODELS OF INTERVENTION, WHICH ARE APPLIED BY THE NURSE AND AIMED AT CHANGING THE BEHAVIOR OF HYPERTENSIVES-REVIEW

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Abstract: *The so-called motivation interviewing is the systematic directing of the patient toward motivation for change. This interviewing includes advices and achieving a feedback, which is aimed at changing the gaps in the patients' unhealthy behavior in a way, that the motivation could improve and change. The modification of lifestyle is an important aspect of the blood pressure control, and serves as a keystone of global managing of many atherosclerotic risk factors. Patients must be informed with a clear rationale of the necessity of special treatment, which responds to their own model of disease. The nurses' effectiveness in the initial hypertension management is very well documented in literature. According to the directions given by the nurse, concerning the managing of hypertension, in appropriately selected individuals, some interventions in lifestyle, have the potential to reduce blood pressure rates, to the equivalence of half to one full standard dose of anti-hypertensive medicament.*
Key words: *interventions, change, hypertension, nurse.*

32. ROMANIAN-ENGLISH WORD ASSOCIATIONS IN STUDENTS' FORMAL WRITING

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Abstract: *This study looks at some lexical mistakes made in formal writing by Romanian economic sciences students learning English as a second language. The study specifically dwells on the situations in which the students took a Romanian word and gave it an English-like ending and spelling. Based on 125 papers collected from students (59 first year finances and banking students, 26 third year marketing students and 40 first year management students), we have identified a series of such misconnections and word associations. The collection method was the writing of a short text on a given topic. Finances and banking students were given the task to write a report starting from a chart, marketing students had to write a cover letter, while management students had to write a business email. Different topics were provided in order not to limit the students' vocabulary to one topic only. The study aims to identify the root cause of such issues and to propose possible solutions.*
Key words: *lexical mistakes, word associations, formal writing, ESP, ESL.*

33. THE INFLUENCE OF ENVIRONMENTAL CONDITIONS OVER ADAPTIVE CROSSOVER BASED ON THE DISTRIBUTION OF CHROMOSOMES IN SEARCH SPACE

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Abstract: *The adaptability of genetic algorithms is given by adjustment of capacity of their genetic operators by controlling their operating parameters. Optimal control of these parameters is a challenge to evolutionary computation. The aim is both to increase the performance and to obtain an evolutionary algorithm that does not require data provided by the operator and operation specific for each problem. The present paper is a study of the influence of environmental conditions (different types of graphs*

to the problem of finding the shortest path) over adaptive crossover based on the distribution of population of chromosomes in search space. We will demonstrate that a direct dependent parameter from position of chromosome in search space, in combination with direct dependent parameter from fitness values, ensure a degree of adaptability of crossover operator compared with adaptive genetic operator who takes into consideration only the value of fitness function.

34. STUDY ON THE ANALYSIS AND APPLICATION OF INFORMATION OBTAINED THROUGH COMPUTERIZED TECHNOLOGY FOR CORRECTING TYPICAL FAULTS IN THE EXECUTION OF ELEMENT C.105 2/1 AIR TURN

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Abstract: *In modern training, there is an increased use of computerized workouts based on devices able to capture precise information about the biomechanical parameters of motion or various physiological indicators, in order to shorten the training time and allow a more rigorous control of the variables related to technical execution. Thus, it is implemented an instrumentalization of sports training, which reduces the weight of empirical work in favor of a highly scientific one. Technological transfer to the field of performance sports often creates the difference between top athletes and other competitors. Computerized training ensures augmentative feedback by providing accurate information (that sometimes is overlooked by the coach) with a prescriptive character, meaning that the athlete knows exactly what to correct at the next repetition. This type of feedback provided by the Xsens Mtw equipment meets some features of the technical elements specific to aerobic gymnastics: the element allows the gymnast to discover relevant sensory information (given that the fast pace of execution or mental tension makes this process difficult); the element is sufficiently complex to require additional information for a top-level execution.*
Key words: *aerobic gymnastics, computerized training, augmentative feedback.*

35. A PSYCHOLINGUISTIC APPROACH TO COMMUNICATION IN ESP CONTEXT-BASED LEARNING. CASE STUDY

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Abstract: *Communication is universal to all human beings and represents a central element to our lives, regulating and shaping human behavior. Communication is an integral part of human life and it includes activities such as talking to each other, disseminating and exchanging information and feedback. In other words, society cannot survive without communication. When communicating, people generate meaning through the exchange of verbal and nonverbal messages in specific contexts. This paper highlights the importance of the psycholinguistic approach to communication in English for Specific Purposes (ESP) context-based learning (the maritime field), taking into consideration the fact that, by the very nature of their job, when communicating, seafarers must be concerned with the decisions they make, the orders they give and the provisions of international maritime law and regulations. For this reason, they are constantly in an international context, even when sailing in territorial waters. This context influences their motivation and their English learning methods, especially since the messages (most often standardized and vital) transmitted in the maritime field must be clear, accurate, concise, unequivocal and fast.*
Key words: *communication, psycholinguistics, English for Specific Purposes (ESP), maritime field, seafarers.*

36. IMPORTANCE OF BIG DATA IN MARITIME TRANSPORT

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Abstract: *As the technology grows fast, big data have become a major topic nowadays. It is interesting due to its nature, namely different types of data combined into one entity, but also because of the opportunities that it brings. Knowledge means power, so a good analysis and mining over huge amounts of data could bring many benefits and decisions could be made based on real time predictions. Maritime transport represents an important part of our lives, and it could be improved integrating big data, because all data is collected and then analyzed, and would help to avoid power failures of different components, based on prediction and different environmental data could be obtained in real time, based on analysis of past data. In this paper we will present the major trends in big data and we will analyze how it could be integrated in maritime transport.*
Key words: *big data, maritime, analysis.*

37. THE EXPERT SYSTEM DEVELOPMENT TECHNOLOGIES IN CLOUD

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Abstract*: The technologies used for an expert system development have an essential role and take the architecture to the next level of innovation. These innovations provide essential assistance to save energy, resources and also to secure the required infrastructure. The paper concentrates on the innovative technologies used for building an expert system. An expert system also comprises an Interface within users interact and an Interface Engine that performs knowledge reasoning. The proposed architecture interconnects multiple programming languages, hardware and software components to build the system.*
Key words: *Technology, Cloud computing, Expert systems, Security, Sustainability, Innovation, Efficient costs.*

38. THE DEVELOPMENT OF SOFTWARE FOR CALCULATION OF LAYDAYS, DEMMURAGE AND DESPATCH

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***Abstract**: A software product development involves stages such as: analysis, design, writing, testing, debugging and maintenance. Although they are considered separate steps, there is a strong interdependent relationship among them, the ultimate goal being to obtain an efficient software solution that can evolve over time. In accordance with this, a personal challenge was to develop software in an academic scope with a friendly-use interface which can easy substitute the classical method calculation of lay-days, demmurage and despach for a ship which can load or unload cargo, helpful for both teachers and students. The main objective was to emphasize in more detail through the stages aforementioned the embodiment of the software EaSyCalc V.0.1., developed entirely in the Matlab software environment.*
***Key words:** lay-days, demurrage, despatch, ship, Matlab.*

39. AN AUTOMATIC METHOD FOR DIGITIZING BATHYMETRIC MAPS

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***Abstract**: Automatic digitizing of bathymetric maps can be of great interest when archive provides these materials in printed or any other analogic format. As an extension of limit detection method for visual watermarks, it makes correct classification for the pixels of interest from the scanned image of the map. This means to identify (interactive) the watermarking limit of the object (in this case isobaths) and to save relative coordinates of sampling points in output file. The numerical values recorded in the output file represent the coordinates of each point and the depth value attached at isobaths. This data can then be used in any system that needs digital*

bathymetric information. The comparison between the image of the bathymetric map rebuilt from digitized data and the original image map demonstrates that they are virtually identical.
***Key words**: automatic digitization, bathymetric map, visual watermark.*

40. PSYCHO – ENTRE ANGOISSE ET PLAISIR

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Abstract: *Dans cet article, nous examinerons Psycho, un thriller d'un suspense farouche qui a été à la fois très populaire et très bien reçu par les critiques. Dans ce film le plaisir dramatique mène le spectateur à établir des liens spectatoriels avec un tueur de telle manière qu'il se trouve la victime d'une identification peu confortable avec celui-ci, identification qui soulève des questions sur le mal en chacun de nous, mais qui permet aussi une maîtrise partielle de nos craintes de ce mal par la libération cathartique. Psycho est l'expression d'une oeuvre qui défie les règles et perturbe le spectateur. L'étrange mélange d'enthousiasmer et de plaire au public, d'une part, et de le perturber et le troubler, d'autre part (parfois dans le même cadre) a offert à Hitchcock un statut presque unique de cinéaste qui a toujours été rentable et qui est également considéré comme un génie et un innovateur sans égal. Pour obtenir la meilleure canalisation de l'émotion et les meilleures réactions du public lors du spectacle, Hitchcock utilise les ressources de son imagination qu'il met au service de la mise en scène et du montage. Ainsi le plaisir est acquis à travers les fortes émotions véhiculées par le medium cinématographique, l'identification avec les personnages, la structure du film, c'est-à-dire le montage des scènes, et l'intrigue taquine.*
***Mots-clés:** identification cinématographique, plaisir, suspense, montage cinématographique.*

41. NEOCLASSICAL WORD FORMATION IN THE ROMANIAN MARITIME VOCABULARY

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Abstract: *The process of neoclassical word formation is extremely productive in the formation of the international scientific and technical terminology. Currently, we can detect a wide variety of neoclassical word formation elements, also called suffixoides and prefixoides, in the structure of the Romanian maritime terms. Prefixoids and suffixoids differ from the ordinary prefixes and suffixes in the fact that they have a high degree of lexical and semantic autonomy, given by the fact that they originate from themes, which in the language of origin (Hellenic or Latin), had a meaning of their own, being nominal, pronominal or verbal themes. Prefixoids and suffixoids enrich the meaning of the concept, to which they emphasize the degree of accuracy. Some of these elements have known an increasing productivity as we approach the current period. This is eloquently proven by the fact that we find them attached to inherited root words (e.g. supravieţuire, suprafaţă, supraveghea) or to words borrowed from the neighbouring languages, many of them attached to a base of French origin (e.g. suprastructură, supraimersiune). Thus, the predilection for this word formation process is obvious in the Romanian maritime terminology, however the significant number of the terms formed this way does not come as a surprise if we consider the fact that that we are dealing with a booming international language.*
Key words*: word formation, suffixoides, prefixoides, maritime term.*

42. RESEARCH WORK OF NURSES AND MIDWIVES STUDENTS IN THE UNIVERSITY OF ROUSSE "ANGEL KANCHEV"

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Abstract: *The scientific report outlines the need to involve students - nurses and midwives in scientific research in higher education and indicates the difficulties faced by students and teachers. The paper describes the main tasks of research for students, as well as the ways and forms in which they are implemented. A copyright research presents the results on the most*

important and most interesting forms of research activity that should help present-day medical specialists and how they are perceived by young people during their training. The analysis points to conclusions that summarize the students' research work as a continuing and expanding learning process.
Key words: *research, training, skills, values, teachers, building skills and competencies for research students, midwives and nurses.*

43. ROLE OF HEALTH CARE PROFESSIONALS IN NEONATAL JAUNDICE

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Abstract*: The article presents results of a copyright study in the Department of Neonatology in the Obstetrics and Gynecology complex of the University Hospital of Ruse 15th Oct 2015 till 15th Oct 2016. 150 students participated from the 3rd and 4th course specialty Midwife and Nurse, Bachelor degree from the University of Rousse "Angel Kanchev". Neonatal jaundice occurs in about two-thirds of all infants during the first postnatal week. The aim of this study is to determine how the knowledge, skills and competencies of student midwives and nurses form clinical thinking and help build a plan of care in a real professional environment in neonatal jaundice.*
Keywords*: neonatal jaundice, newborns, midwives, nurses, health care.*

44. LARYNGEAL COMPLICATIONS ASSOCIATED WITH GASTROESOPHAGEAL REFLUX DISEASE

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Abstract: *Aim of the study is to highlight the laryngeal pathology induced by the gastroesophageal reflux, frequently underdiagnosed in current medical practice, especially when it occurs in the absence of digestive associated symptoms. Early diagnosis followed by an appropriate treatment to evolutive stage of laryngeal lesions ensure their healing and / or prevent their progression to irreversible forms. Evaluation and ranking of diagnostic techniques and technologies useful in highlighting laryngeal lesions caused by gastroesophageal reflux disease, awareness mechanisms by which it can alter the functions of the larynx, especially phonation. Results consist in making a diagnosis protocol focused on each patient symptoms and one for assessment of response to therapy, especially for patients with laryngeal symptoms only. Methods of diagnosis and treatment are focused on recovery of phonation function using from current therapy resources to devise systems for voice reproduction in normal conditions when the larynx is irreversibly compromised. Conclusions: It is underlined the importance of interdisciplinary collaboration (ENT, Family Medicine, Gastroenterology, Surgery) in the early diagnosis and appropriate therapy of pathology induced laryngeal reflux disease.*
Key words: *gastroesophageal reflux (GER), reflux laryngo-pharyngeal (LPR), laryngeal lesions, hoarseness/dysphonia.*

45. THE ROLE OF COMMUNICATION IN THE STUDENT-CENTERED CLASSROOM

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Abstract: *Communication plays a vital role in human daily life, being mainly defined as a two-way process or as a system whereby messages are sent and feedback is received. No human being can live without communication with other people such as family, friends or colleagues. The speech was invented in order to make communication more efficient and it represents a significant tool in all social activities and professions such as lawyers, teachers, sailors, journalists and so on. Thus, communication, by its social nature, engages people in sharing their knowledge and experience. This paper presents the results of our research conducted in order to emphasize the role of communication in the ESP (English for Specific Purposes) student-centered classroom. When organizing and conducting ESP classes, the teacher obtains better results if s/he applies student-centered methods. For this purpose, s/he should take into consideration elements such as the students' training level and main field of study, the types of exercises that could rise their interest (including working in groups and in pairs), the oral expression of scientific and technical symbols, the verbalization of graphics, the interpretation of schemes, the systematization of the vocabulary items according to the principles of logic order, the definition and interpretation processes and operations, finding the meaning of words in context, etc. Moreover, the teacher should also take into account the students' individual variables (i.e. their individual special skills, such as "a good ear", "power of imitation," "superior verbal memory", previous linguistic experience, learning pace and style, motivation, desire to be praised and encouraged).*
Key words: *communication, student-centered approach, English for Specific Purposes (ESP), teacher, learning.*

46. AUTOMATICALLY FINDING THE HAMILTONIAN PATH IN A DIRECTED GRAPH WITHOUT CYCLES BY USING THE YUCHEN ALGORITHM

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Abstract*: The problem of operations succession (the execution of multiple operations on a machine in the order in which the sum of the consumed times/cycles for getting ready the machine to move from one operation to another to be minimum), the traveling salesman problem (finding the shortest path that visits all the houses from his neighborhood) are problems that can be reduced to finding the Hamiltonian path in a directed graph.*

"Yu Chen's algorithm" [1] solves the problem of finding the Hamiltonian path in a directed graph without cycles. The algorithm finds the adjacency matrix in a directed, finite graph, with vertices. If the graph has no cycles, the algorithm computes the powers of reaching the vertices. If the sum of the powers for reaching the vertices is equal to and if the powers for reaching the vertices are distinct two by two, then the graph has a Hamiltonian path defined by the powers of reaching the vertices. In this paper, the author presents an implementation in C language of the Yu Chen algorithm. The program presents the computations of the adjacency matrix and test whether there are cycles or not in the graph. If there are no cycles, the program computes the powers of reaching the vertices, checks the requirements from Yu Chen's theory and if they are satisfied, determines the Hamiltonian path in the graph.

47. PROFESSIONAL COMMUNICATION SKILLS AND ESP TEACHING IN THE DIGITAL WORLD

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Abstract: *For a long period of time, ESP teaching process has been only dealing with teaching specialized and professional terminology and understanding texts whereas nowadays the digital age has transformed the resources and the sources of information into an accessible tool opening new perspectives. Nonetheless, today's globalized professional climate asks for its members to also master important communicative skills that strengthen their specialist abilities whether they are to fulfill their tasks productively and secure their way to accomplishment. Albeit the probable need for competent proficiency in communication, there looks to be deficient available research producing an exact discerning of the rules of teaching experienced communication to college scholars as a segment of the ESP curriculum. The paper takes into consideration the essential skills supporting rewarding professional communication and tries to discuss a functional combined professional communication example to be put into practice in the academic environment, highlighting the value of English in an engineering setting.*

Key words: *teaching resources, communication, digital world, competent performance.*

48. DO YOU SPEAK ENGLISH? LANGUAGE ANXIETY IN THE SPEAKING SKILL

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Abstract: *The literature suggests that the speaking skill is extremely anxiety-provoking in many languages, therefore students are hindered from speaking so very often. There are no doubt psychological factors that hinder students from speaking any foreign language, and these apply to the English language as well. That is why teachers' efforts should be focused on developing students' ability to speak, giving them more opportunities to express themselves by providing speaking activities as many as possible. The speaking skill, one of the four skills when learning a language, is considered a great challenge for all language learners, and arouses much more anxiety than the other skills. The aim of this paper is to bring into discussion the factors that lead to anxiety, and some possible solutions to overcome them.*
Key words: *psychological factors, speaking skill, language anxiety, fears, motivation.*

49. THE SECOND YEAR DECK MARITIME ENGLISH COURSE: E-LEARNING MODE VS THE TRADITIONAL PRINTED VERSION

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Abstract: *First, there will be emphasised the importance of Maritime English in the shipping industry in the context of the ever growing number of munltinational manned ships. As a result, the demand for Maritime English competences, stipulated by STCW78 and other IMO documents, has become ever greater. Therefore, the MET institutions will have to adjust and*

harmonise their syllabi in order to obtain the same learning outcome results. The syllabi contents must be endorsed by properly designed courses. This paper proposes to compare the e-learning teaching/learning mode with the traditional face to face class approach focusing on the course outline and content. A description of the course will be provided, and then different sections of the units will be illustrated, compared and commented upon. Advantages and drawbacks of the two ME course versions will also be evidenced. Finally, the conclusions will underline the importance of a well structured course material which may greatly facilitate the learners` knowledge acquisition.

50. RHETORICAL TOPOS IN THE OVID'S EPISTLES FROM EXILE: TRISTIA - BOOK II

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Abstract: *This paper aims to achieve an analysis of the elegiac discourse that the poet Publius Ovisius Naso performs masterfully in the second book of the Tristia, which he writes during his exile in Tomis. The purpose of this paper is to highlight the position and attitude of the poet on his exile which he was convicted by imperial edict. The analysis that we propose is based on two approaches to research the discourse, namely: discursive resources, on the one hand and discursive practices, on the other. In terms of discursive resources the analysis highlights the interpretative repertoires used by the poet to presenting his defense in relation to his condition, namely exiled by relegatio. An important role in this regard lies with symbolic resources which the poet uses the most. On the other hand, the analysis of discursive practices is based on the way of organization of discourse and on rhetorical of language which the poet uses masterfully and which reveals his rhetorical talent.*

Key words: *rhetorical topos, symbolic resources, discursive resources, discursive practices, rhetoric of language.*

51. EFFECTIVE PROFESSIONAL COMMUNICATION IN ENGINEERING

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Abstract: The economic, social, technical and scientific progress of our world set up the prerequisites for the globalization of English over the past century. English is used as a communication tool in various situations. Together with other branches of English for Specialized Purposes, English for engineering is part of the language used in international communication. The purpose of communication on a technical and scientific level is to convey information and to motivate professionals to attend to specific work tasks. EST (English for Science and Technology) describes objects and processes in technical areas of science and engineering. In consequence of globalization, EST teaching in Engineering and Science education has become mandatory and is given equal significance along with other basic and applied sciences. Given the demand for qualified engineers we need to consider the global economic context where said engineers have a pivotal role in conveying specialized information as accurately as possible. Enhancing one's vocabulary is one of the most important ingredients of effective professional communication.
Key words: EST, ESP, engineering jargon, professional communication.