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THE EVOLUTION OF THE LEGAL FRAMEWORK OF FISHERY AND AQUACULTURE IN THE ROMANIAN LEGISLATION

ADASCALITEI OANA

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ABSTRACT

The first legal frame work in Romania regarding the fish stock, the fishery and the aquaculture was set by Law no. 192/2001 as amended and subsequently completed by Government's emergency order no. 76/2002, approved with amendments by means of Law no. 42/2003. The necessity of harmonizing the Romanian legislation with the Community fishery policy resulted in the abrogation of this instrument and the adoption of Order 23/2008 currently in force. This instrument regulates the preservation, management and exploitation of living aquatic resources, aquaculture, the processing and marketing of fishery and aquaculture products when these activities are performed on the territory of Romania or in waters under the national jurisdiction of Romania by ships under Romanian or foreign flags. Order 23/2008 stands for the general regulating framework, on the basis of which the secondary legislation in the fishing field is adopted**.**

Keywords: *fishing, aquaculture, legal framework.*

„THE CREATOR”- THE SOURCE OF RIGHTS PROTECTION, „THE PEOPLE OF THE SEA”

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ABSTRACT

The laws of nature have shown that the great civilizations of the world were born and prospered through the exploitation of productive land, favored by the marine atmosphere. Thus, the development of Europe and the Middle East focused around the Mediterranean area. The Egyptian, Phoenician and Cretan civilizations have flowered, in turn, on the shores of this sea which, surrounded by the Roman Empire, was assimilated to an inner sea. In the modern period, many ports developed on the shores of the Atlantic and Pacific Oceans, the gravity center of the commercial competition shifting from land to water, which led to rivalries of political-economic order between the great powers.

The evolution and development of legal norms, the process of modernizing the current legal system, are based on traditional religious systems, such as Hindu, Islamic, and Hebrew law, or the law of the Far East, with an indisputable religious origin.

Keywords: *Freedom of the seas; Montego Bay Convention, 1982; vessels; God; Jessus, Noah*

PLEADINGS AND SERMONS - WORKS PROTECTED BY COPYRIGHT

ANECHITOAE CONSTANTIN

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ABSTRACT

It is well known that the Church has overtaken the first legal standards, along with the legal vocabulary, from the life of the state, and it was only later when it had developed its own observances with specific terminology.

The violation of moral and canonical observances, by persons who are guilty of similar offences, cause personal prejudices to those whose rights are violated, even to the church - as a state of canonical order.

Keywords: *Copyright, Pleadings, Sermon, Church, Works of Service*

THE MARITIME SALVAGE AGREEMENT

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ABSTRACT

Until adopting the International Convention for the Unification of certain Rules of Law relating to Assistance and Salvage at Sea - 23 September 1910, Brussels-, the practice of maritime law and jurisprudence made often a distinction between assistance and salvage, in the sense that assistance was considered an action committed in any form in order to assist the vessel in avoiding and preventing the occurrence of dangers and the removal of its effects.

Salvage was defined as that action taken in order to save the vessel, its cargo and its crew (the maritime expedition in its entity) from certain total destruction. The Convention, as it is called in the lines above, led by its application in a standardized and generalized form to stopping the endless controversy in doctrine and practice, controversy which pushed the parties to unnecessary and costly lawsuits in courts and arbitration, with important patrimonial losses, and which, by their increased duration with delays in achieving maritime claims, were directly affecting the security of maritime expeditions in their commercial purpose

Keywords: *Salvage at sea, maritime support, The International Convention for the Unification of certain rules of law relating to Assistance and Salvage at Sea- 23 September 1910, Brussels*

COMMUNICATING INTERNATIONALLY CROSS-CULTURE COMMUNICATING MADE EASY ON BOARD

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ABSTRACT

Many owners have problems with multicultural crews. That this subject is discussed in many maritime forums indicates that we are *not* taking full advantage of ethnic mixtures and that we do have a problem! This problem will grow unless we quickly find a sustainable way on how to work together. With less prejudice and stereotyping in this multicultural-setting this might be feasible. A true global shipping community requires cooperation over both cultural and language boundaries.
New and different situations ask for new skills and competences from seafarers where culture is recognized as having impact on communication and safety on board. Intercultural competence, especially between European and non-European nationalities, and intercultural awareness of differences, stereotyping, prejudice, and behaviour are the objectives in our presentation. We shall also present the importance of cross cultural communication skills.

Keywords: *multicultural crews, cultural diversity, cross-cultural communication skills, intercultural awareness..*

ALBANIAN PORT SECTOR AND THE CORRIDOR VIII

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ABSTRACT

Ports serve as sea-land interfaces for cargo and passengers movement. Thus they play the role of big doors for each country's economy, relating it to other countries' economies. A crucial part of the multimodal transport, they are of a great economic and strategic importance for Albania. Covering 427 km of the Albanian seacoast from North to South, the throughput of four principal ports, located in Shëngjin, Durrës, Vlorë and Sarandë, raised at 4.3 million tons of cargo in 2007, representing 68% of the external trade. Many interventions related to legal aspects of port ownership and administration, and a tidy international funding by World Bank, European Commission, EIB, EBRD, etc., aiming efficiency by the improvement of ports' infrastructure and superstructure, opened way to structural, operational and financial development for Albanian ports. This paper is an attempt to highlight the main efforts made by Albanian ports for their respective development, within the perspective of the Pan-European Corridor VIII, signed in 2002 between Italy and South-Balkan countries, a question of many interest that should push the Government of Albania (GoA) toward new ideas and strategy, to give the right attention to the Albanian seacoast with natural deep water in report to the main Mediterranean sea-lanes from Gibraltar to Black Sea and from Suez Canal to North Adriatic area

Keywords: *port strategy, port reform, port development, concessions, Corridor VIII.*

STUDY ON THE EXONERATION AVAILABLE TO CARRIERS, REGARDING ERROR IN NAVIGATION OR MANAGEMENT OF THE SHIP: ANALYISING A CASE OF A CAPSIZED RO/RO VESSEL

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ABSTRACT

"Carriers Liability" is one of the most important issues of the shipping law. In principle, the carrier is responsible for loss or damage of cargo carried by sea, between date of delivery and re delivery, when cargo is in his possession.

In Turkish Law System, there are some exceptions of this general provision, brought by the article 1061 of TTK (Turkish Commercial Code) which is mainly based on The Hague Rules. These exceptions coming from practice for centuries in maritime law; are considered as immunities of carrier's liabilities, applicable in certain conditions or circumstances, and these exceptions differentiate the carriers by sea from the carriers by land or air.

These exceptions regarding carrier's liability, similar to the other principles of the maritime law, are results of the specific features of marine and maritime world and they came into force in practice, throughout the historical developments of maritime law

Keywords: *Turkish Law System*

A STUDY ON THE LEGAL ASPECTS OF PIRACY AND ARMED ROBERY

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ABSTRACT

The vessels sailing on over the world are always under the threat of several risks some of which result from natural causes, some of which result from acts or omissions of the crew or third persons. These risks are generally called as “navigational risks or dangers” within the framework of maritime safety.

On the other hand, ships, particularly commercial vessels and yacths are also under the risks of unlawful acts and maritime security. In the last century, the scope of the maritime safety has enlarged.

Fifty years ago the most important issue for the seaman was only “safe navigation”. In time, the increasing maritime traffic and size of ships and cargoes has led to accidents with high number of casualties. Furthermore, certain maritime disasters resulted in severe pollution cases, and therefore, the states and IMO gathered around the principle of “safe and clean seas” and brought special international regulations on the issue.

In this context, this article will comparatively analyse the piracy related regulations in international and turkish law. Furthermore, it will give examples of piracy acts in international seas. Overall, the general situation regarding piracy will be studied on.

Keywords: *Piracy, Armed Robbery at Seas, Maritime Safety, Maritime Security, Turkish and International Maritime Law.*.

FREE MOVEMENT OF SERVICES (AND THE LIBERALISATION OF MARITIME SERVICE SECTOR) IN THE EUROPEAN UNION (EU): LIMITS OF INSTITUTIONAL STEPS FROM ABOVE

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ABSTRACT

This paper gives an account of the historical development of the free movement of services (including the maritime service sector) in the EU and it also focuses on the limits of institutional steps taken by Brussels in further advancing liberalisation of the Single Market. By moving on from the consensus that is achieved in the multilateral trade negotiations of General Agreement on Trade and Tariffs (GATT) and The General Agreement on Trade in Services (GATS), the EU member states have taken further measures to deepen the economic integration with a view to create a single market by means of free movement of goods, services, capital and labour. However, the free movement of services (and to a certain extent the free movement of labour, due to the cultural differences, the problems in mutual recognition of diplomas and the language problems) have remained limited; although the European institutions have taken various measures and developed the relevant parts of the *Acquis Communautaire* in time. In this context, this paper will elucidate why the services sector is lagging behind within the Single Market, and it will also offer several steps to further deepen the economic integration in this field.

Keywords: *EU, Single Market, Free Movement of Services, Maritime Services Sector, GATT, GATS*

THE WATER TERRITORY – COMPONENT OF THE STATE TERRITORY

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ABSTRACT

This study is intended to be a review of the state territory by specifically underlining the water territory as an essential element of the state. There are listed different opinions through which the water territory is classified as the political-state element, element regarding the security of the water territory, its regulation, jurisdiction and an overview over the natural borders. The work specifies the existent disputes of which Romania is an active part in order to indentify the real problems and their amicable settlement by respecting the international right.

Keywords: *territory, legal regime, water, frontier, state*

ROMANIAN MARITIME SPACE DELIMITATION-VERSUS DISPUTE IN THE BLACK SEA

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ABSTRACT

Snake Island, historical attestation, map-drawing in different works, from antiquity until present days, its passing from one nation to another, or from one state to another has generated disputes through its position, being used as a currency. At present, the space delimitation in the Black Sea basin in order to establish the supremacy over the exclusive economical area and the continental plateau, dispute regulated through the trial that took place between Romania and Ukraine, settled by the International Court of Justice from Hague, Romania winning the case.

Keywords: *island, jurisdiction, treaty, dispute, delimitation, economical area*

THE EXISTENCE OF BASTROE CHANNEL – ARGUMENTS FOR AND AGAINST

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ABSTRACT

The brief mentioning in this article of the construction of Bastroe channel, on the Ukrainian side, has led and will lead to firm positions taken by Romania and the international community regarding the impact on the ecosystem of Danube Delta and the cross-border problems regarding the navigation on Danube river channels. It is presented the international legal frame regarding the "Bastroe" issue the arguments for and against the building the channel, the measures taken by the Romanian Ministry of Foreign Affairs and last but not least the positions of the international organizations.

Keywords: *channel, bilateral agreement, ecosystem, natural borders*

CHALLENGES TO EDUCATION AND TRAINING IN THE FIELD OF HARBOUR PROTECTION SECURITY

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ABSTRACT

Using modeling and simulations has established itself as the most effective approach of preparing personnel engaged with crisis management, including the training of port security responsible personnel. On the background of presenting the overall methodology of transforming Bulgarian Harbor Protection System, the paper formulates a set of requirements for port security related education and training and proposes a general model of a simulating complex supporting the education and training process. The elaboration of the simulation complex is a big challenge to education and training in the field of harbour protection security.

Keywords: *harbour protection, port security, modeling, simulator, education, training*

MANAGEMENT AND COMMUNICATION AT THE WORKPLACE

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ABSTRACT

This study is the starting point for an anylisis about the business context and its basic characteristics (the existence of a formal organisation, the relationship with the labour tasks and people's labour roles), the art of communicating in business relationships, with all the aspects related to it, continuing with more specific issues such as, the cognitive approach and the intercultural approach to business culture, and ending with specific aspects of the Romanian business culture, concerning business, organizational climate, teams an d stress at the workplace The paper has as a purpose the presentation of an approach of a special type of culture, the business culture, offering insights into the language of business, its characteristics and how this language works in context. In many organizations there are stress factors that can affect the efficiency of work of employees, regardless of hierarchical level at which they work. Stress is the response of adaptation, mediated by individual characteristics, response generated by external actions or events that prompted an individual effort mentally and / or physical special. A good use of stress means to have physiologic reaction, emotional and psychological necessary action, followed by recovery enough to have this amount of energy in case of need or when it is desirable.

Keywords: *organizational communication, culture, stress factor, health, effort.*

THE STUDY OF STRESS-STRAINS STATE IN A STATIC LOADED COMPOSITE PLATE

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ABSTRACT

This paper presents a study using FEM and experimental tests for static loading on a glass reinforced polyester plate. The study determined the remanent stress state that arises in the planar plate after fabrication and curing of the resin. This was possible by making a hole in the plate. For the experimental work, strain gauges measurement method was used. The study pointed out that using Finite Element Method for calculation of the glass-reinforced polyester structures is a good choice. The remanent stresses were also pointed out in the stress state which appeared around the hole.

Keywords: *Finite Element Method, Strain gauges measurement method*

STRAINS AND STRESSES IN A MARINE DRILLING PLATFORM LEG

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ABSTRACT

In this paper is presented studies using Finite Element Method and experimental verification for static tests on a model leg of the marine drilling platform. Study aims to determine the stresses that occur in the structure of truss leg marine drilling platform built after OFFSHORE project in Romania. To analyze the static state of stresses was considered an experimental model small scale (1:15) of such a leg. The model was manufactured from steel high ally, and parts was welded in same condition, with preheating like drilling platform legs. The elements are pipes. The structure has been analyzed numerically using FEM. The used program was FEMAP. Numerical modeling results were validated by experimental measurements which came through the state of stresses in certain parts of the leg structure. The used method was strain gauges measurement method. The loads taken in consideration was divided in two: loads who bend the leg, and loads who twist the leg. The numerical and experimental tests give us a measure of the stress and strain and also knowledge how to use this kind of methods in study of drilling platform legs.

Keywords: *Finite Element Method, Strain gauges measurement method*

THE CREATION OF A SPECIFIC MATERIAL GROUND FOR THE NAVAL EDUCATION AND THE ECOLOGICAL EDUCATION FOR NAVY STUDENTS

OPRISAN NAIE GILLES

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ABSTRACT

This degradation of Siutghiol and Tabacarie lakes has precise causes to be discovered and eliminated as soon as possible. It is still possible and we have to react quicklyto preserve the purity of the two lakes of the natural balance of flora and fauna. We just analised one pollution source but they are stil many and more important.[1]

Keywords: *Byosistem, ecologic equilibrum, polution, residual waters, degradation, etc.*[2]

[1] In order to ensure a strictly scientific character and the permenent checking of the applied effects of the investigations we made on our students and also on remarkable personnel in the navy a good cooperation we had permanently with mr. ***Mihael Ioan TROCAN***, research assistent, first degree at National Institute of Marine Geology Geoechology (***GeoEchoMar***) concerning his activity aboard ***„Mare Nigrum"*** – (a ship for marine researches (former ,,***Somes"***) - first educational ship of the Civilian Naval Institute from Constanta).

[2] In the end we mention the contribution in achieving this work of mr. col. (rs.) ***Dan NICOLAU***.

NEW STANDARDS AND TECHNOLOGIES IN MARINE RADAR IMPLEMENTATION

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ABSTRACT

Radar is a legal necessity for the safe navigation of merchant ships and, within vessel traffic services, is indispensable to the operation of major ports and harbours**.** This paper describes some aspects of a 'New Technology' radar and discusses the challenges that face the radar designer in the price conscious marine radar market. The new and various international regulations governing marine radar are examined, a brief historical background is given to modern-day practice and the paper closes with a discussion about new technologies used in marine radars implementation.

Keywords: *marine radar, rain and sea clutter, digital signal processing, pulse compression, IMO & ITU radar regulations.*

SIGNAL PROCESSING WAVELET TECHNIQUES IN VIBRATION ANALYSIS

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ABSTRACT

Using vibration analysis on rotating machinery enables the early detection of faults before breakdown. The vibration in rotating machinery is mostly caused by unbalance, misalignment, mechanical looseness, rubs, shaft crack and other malfunctions. The diagnostic on these faults was mainly focused on the analysis of the steady state vibrations. In this article we develop an experiment to detect different fault conditions using the vibration signals during machine run-up (non-stationary signals). For this study, the experimental model consists of an electrical motor, a flexible coupling and three disks mounted on the rotating shaft supported by two identical ball bearings. The effect of misalignment and mechanical looseness faults on the transient response were analyzed using CWT (Continuous Wavelet Transform), WPT (Wavelet Packets Transform).

Data was measured using a PULSE 12 system and was processed using MATLAB. The experimental results show that the application of wavelet analysis in the diagnostic of faults can be used to detect early defects in rotating machinery and it is very suitable to non-stationary signal analysis.

Keywords*: wavelet packets transform, continuous wavelet transform, fault detection, rotating machinery*

SEARCH RESULTS OF MIXTRA- NAVAL AND ROAD COMPLEX SYSTEM

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ABSTRACT

This paper presents a mixed swift intervention system MIXTRA, at natural calamities, made of a specialized tractor vehicle and a multifunctional boat which can transport in the affected area one another, by land and by water. The project consists in the realization of a boat having a mobile platform at bow and also to equip it with interchangeable equipments boat - special tractor unit. Due to a large specter of equipment and materials this system can be used in case of inundation for people, life stock and goods evacuation; first aid, fire fighting, aquatic ecological disasters, by day or by night and in areas accessible by water..

Keywords: *mixed road-naval system, emergency situations, rescue boat, bow-ramp*

ASPECTS ON REVISION OF QUALITY MANAGEMENT STANDARD ISO 9001 IN 2008

STANCA COSTEL

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ABSTRACT

The paper presents the changes introduced by the new edition of quality management standard ISO 9001 entered into force in November 2008. No new requires are included and the changes in the new edition are focused on clarification of clauses for a better implementation.

A transition period of one year was considered appropriate, so all organizations which implemented a QMS must revise own quality management systems during the year 2009.

Keywords: *ISO 9001, QMS, integrated management systems*

FINANCING SHIPPING COMPANIES UNDER CRISIS

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ABSTRACT

It is known that in conditions of crisis and recession, the industry and the population's consumption is reduced. This is followed by a diminishing in and a reduction of investments, which affects the volume of international trade. Shipping felt most strongly this development, since 90% of world trade in goods takes place at sea. Under conditions of crisis, many transport capacity remain unused and many ship orders are canceled. Most companies will focus on protecting assets, improve performance and business restructuring, placing greater emphasis on the management of liquidity and cash flow. The main objective of the cash flow of a project is to provide information on receipts and payments of money. Background forecasting in transport require complex calculations to highlight the requirements of future movement assets, information and people in the forecast. Develop a forecast is preceded by a comprehensive retrospective analysis of the social economic activity, representing the diagnosis of the role of the state economy at a time. The most important and difficult problem is the determination of resources available for the forecast period and their distribution according to needs.

Keywords*: shipping companies, economic crisis, cash flow, funding sources.*

THE INFLUENCE OF PARAMETRIC ROLLING ON PORT - CONTAINER'S SHIP STABILITY

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ABSTRACT

Building port container ships has known during the past few years the fastest development in the shipping world. The tendency to build very large port container ships, capable of carrying thousands of containers in complete safety, has led to modifications in the hull's geometry and construction and to the correlation of different fineness coefficients.

The vessels that deploy high cruise speeds, for example ferryboats, Ro-Ro ships, port containers, passenger ships, have a relatively small block coefficient which gives a slight different shape to the ship's hull, different from the classic one that can be found at bulk carriers or at tankers. The asymmetry of the ship's hull induces the parametric rolling which in special conditions can affect the ship's stability by producing a severe rolling.

Rolling appears under the influence of waves, especially the ones coming from amidships and it is amplified by the quick variation of the GM (metacentric height) which has enough energy to supply the initial half of the rolling.

This paper is trying to show the influence of the parametric rolling on the ship's stability, especially on a port container ship in different floating conditions and with different actions of the external factors.

Keywords: *parametric rolling, container ship, rudder forces, synchronous rolling, metacentric height..*

APPROACHES TO THE CONCEPT OF SAFETY CULTURE

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ABSTRACT

The emergence of the concept of safety culture in shipping has been promoted by the International Maritime Organization (IMO). The adoption of the International Safety Management Code and of the ammended International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW 1995), together with the development of Formal Safety Assessment are considered to be the most important tools within the concept of safety culture in shipping.

Major accidents can be said to be the cause of failures in safety management systems. Even when enormous effort has gone into developing these systems, it seems they remain fallible. It is largely for this reason that the concept of safety culture is now receiving widespread attention. This does not mean that systems are insignificant, but rather that they will function better in organizations which have developed a culture of safety.

Keywords: *safety culture, safety climate, key issues*

OIL SPILL IN THE KERCH STRAIT

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ABSTRACT

On 11 November 2007, a strong storm in the Kerch Strait (which connects the Sea of Azov with the Black Sea and separates Ukraine from the Russian Federation) blew winds of up to 35 m/s and waves of up to five meters. The storm resulted in thirteen vessels being sunk, stranded, or damaged and the incident caused loss of life, of property, and environmental harm. The four vessels that sank were: motor tanker Volgoneft-139 (Russian Flag), motor vessel Volnogorsk, motor vessel Nahichevan (Russian Flag), and motor vessel Kovel (Russian Flag). Russian motor vessel Volgoneft-139 initially leaked approximately 1,300 tonnes of fuel oil into the sea. Treacherous weather conditions at sea (18-20 m/s wind, 2.5 m waves), hampered any clean-up efforts in the sea during the initial 24 hours, resulting in oil being transported to the shorelines on both sides of the Kerch Strait.

Keywords: *oil spill, pollution, Kerch Strait, marine environment, emergency response*

A METHOD OF IMPROVING THE COMMUTATION OF A SINGLE-PHASE UNIVERSAL MOTOR

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ABSTRACT

The main purpose of this paper is to analyze a method of commutation of a single-phase universal motor and to improve the commutation using partly shielded supplementary poles. Considerable improving of the commutation is experimentally registered which is confirmation of the theoretical treatment of this problem.

Keywords: *single-phase universal motor , commutation, shielded suplementary poles*

SIMULATION OF THE MARINE DIESEL ENGINE POLLUTION

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ABSTRACT

This paper tried to simulate the combustion inside the marine diesel engine using the newest computer methods and technologies with the result of a diverse and rich palette of solutions, extremely useful for the study and prediction of complex phenomena of the fuel combustion.

Keywords: *marine diesel engine, combustion, finite element analysis, chemical reaction, non-premixed constituents, multiple species*

COMPARISON BETWEEN FAULT TREE (FTA) AND MARKOV ANALYSIS (MA)

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ABSTRACT

This paper describes the various types of common system design complexities and compares the FTA and MA approaches for each of these system configurations. The results of these two approaches are then compared, providing some relative conclusions.

Key words: *fault tree method (FTA), Markov analysis (MA)*

EVALUATION OF NRMT SYSTEM PREVISIONAL RELIABILITY

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ABSTRACT

The paper describes a methode for evaluatin of previsionale reliability of reagent missile throwers navale (NRMT), 122 mm caliber. We also present a Monte Carlo simulation method applied to NRMT sistems and subsistems.

Keywords: *Monte Carlo simulation method, reliability diagram, results comparision.*

THE USE OF MAPLE IN THE STUDY OF DYNAMICAL SYSTEMS

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ABSTRACT

In this paper we present how the Maple software can be used to create graphical representation of the chaotic attractors and their basin of attraction for two dimensional noninvertible maps. In addition, in order to draw many graphs, the standard Microsoft Excel software is employed. Our ideas are exemplified on the case of the map $T:\begin{cases} x_{n+1} = ax_n + y_n \\ y_{n+1} = b + x_n^2 \end{cases}$ proposed in [3]. Our programs are explicitly presented.

Keywords: *Computer graphics, nonlinear discrete dynamical models; invariant curves.*

COMPUTER SYSTEMS FOR THE ENVIRONMENT MONITORING

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ABSTRACT

The paper present systems for the surveillance, prediction, warning (alarm) and response which systematically assess the qualitative characteristics of the environmental factors. The system of the environmental monitoring is an intergrated system which continuously monitors the state of the environment and provides data concerning all structural components of the environment and the paper present the way to design a computer system for the integrated monitoring of the environment.

Keywords: *environment, monitoring, integrated system*

OPERATING BEHAVIOUR OF THE SLIDING RINGS OF AN AXIAL MECHANICAL SEAL AND MAINTENANCE SERVICE PROPOSAL FOR THE RELIABILITY IMPROVEMENT

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ABSTRACT

For the endurance and reliability improvement of the axial mechanical seals, the study of the sliding rings behaviour is the main method for the best proposals of service maintenance. The paper presents a short analysis of the field.

Keywords:*mechanical seal, sliding rings, durability, reliability maintenance improvement*

THE INFLUENCE OF WEAR UPON THE SERVICE LIFE OF THE AXIAL SEALS (WITH SLIDING RINGS)

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ABSTRACT

Statement about wear resistence and service life **L** for different materials and the geometrical shape of the sliding rings of the axial seals are valid only if based on practical tests and under normal running conditions.

Any modifications of the parameters, such as: friction condition, sealing pressure **p**, sliding speed $\mathbf{v_a}$, temperature, corrosion rate, impurity content of sealed fluid, vibrations any change of sliding rings geometry and the quality of ring's material- all have an important influence on the sliding rings wear and upon the service life **L** of a seal.

Keywords: *mechanical seal, sliding rings, wear, service life.*

ADVANCED ENGINEERING TECHNIQUES IN LANDFILLS LEACHATE TREATMENT

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ABSTRACT

Recycling of materials and environmental protection are matters of interest that were treated differently in Romania in the last decades. Waste management and management of polluted waters coming from contaminated sites must now respect the EU directives, Romanian laws and should give the appropriate consideration to all aspects of environmental protection as for a European Union state member.

Advanced engineering and applying international rules, BAT (Best Available Techniques) or BATNEEC (Best Available Environmental Techniques Not Entailing Excessive Costs) must be considered to be applied in the soon coming projects financed by EU and co financed by Romanian Government and/or Local Authorities.

One of the state-of-the-art technologies in leachate treatment is the usage of SBR's (Sequential Batch Reactors) in comparison with classic systems, leading to a most cost – effective technical solution for both stages of construction and operation and maintenance periods.

Keywords: *leachate, sequential batch reactors, contaminants, acetogenesis, methanogenesis.*

CHARPY IMPACT BEHAVIOR ON ABS MOLDED PARTS

NITA ALEXANDRA

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ABSTRACT

The paper presents the evaluation of impact behaviour for Acrylonitrile-Butadiene-Styrene (ABS) polymeric material parts. Charpy impact test on polymeric materials is a standardized test described in ASTM Standard D 6110 or SR EN ISO 179 and is widely applied in industry, since it is easy to prepare and conduct. We use for testing a Instron - Dynatup equipment which have a fully integrated hardware and software package that let us capture load information at very high speed from the impact tests.

Keywords: *polymeric material, ABS part, Charpy impact test.*

CRYOGENIC POWER

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ABSTRACT

LNG (Liquefied natural gas) is produced by cooling, pressurizing and liquefying crude natural gas from which impurities have been removed, at a very low temperature of -160 °C, causing it to contract to $1/600^{th}$ of its volume at room temperature and making sufficiently compact for swift transport in specially insulated tankers.

When this gas is then warmed to an ambient temperature of 20 °C, the temperature differential yields cryogenic energy of 919 kj/kg (219.5 cal kg). This cryogenic energy can be utilized for various purposes including cryogenic energy power generation, air separation, the production of liquefied carbonic acid and dry ice, cold storage warehouses, and for the reliquefaction of LNG boil off gas (BOG), and these all comprise LNG cryogenic energy applications.

Keywords: *LNG (Liquefied natural gas) 1, cryogenic energy 2, reliquefaction 3, BOG* (boil off gas) *4*

MEDIUM - HIGH VOLTAGE NAVAL ELECTRICAL SYSTEMS

(PART ONE)

[1]NOVAC IORDAN, [1]GHEORGHE CONSTANTIN

[1]*Constanta Maritime University, Romania*

ABSTRACT

The contents include principles of medium and high voltage marine power systems, cabling systems, electrical equipment, power system protection and coordination, instruments and meters, and electrical utilization systems.

Keywords: *marine power systems 1, high voltage 2 , electric propulsion system 3*

MEDIUM - HIGH VOLTAGE NAVAL ELECTRICAL SYSTEMS

(PART TWO)

[1]NOVAC IORDAN, [1]GHEORGHE CONSTANTIN

[1]*Constanta Maritime University, Romania*

ABSTRACT

The contents include principles of medium and high voltage marine power systems, cabling systems, electrical equipment, power system protection and coordination, instruments and meters, and electrical utilization systems, electric propulsion, azimuth and thrusters.

Keywords: *marine power systems 1, high voltage 2 , electric propulsion system 3*

MONITORING WATER QUALITY IN CITY STEFANESTI – ARGES

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ABSTRACT

In front of the paper, we designed and implemented to be a system of monitoring of drinking water system will be implemented in the area of Pitesti municipality, city Stefanesti. Starting from the need to ensure an enhanced quality of drinking water standards in force, we used high-technology in data acquisition and transmission, by a system that ensures the quality required, and has as its main objective the preservation of a balance between resources water and its consumption, while maintaining a low cost per cubic meter of water supplied to the public.

Keywords: *analysis pH, analysis salinității water, analysis turbiditatii water, analysis of magnesium water*

QUALITY MONITORING SYSTEM FOR THE CITY WATER STEFANESTI – ARGES

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ABSTRACT

In front of the paper presents the design and implementation of a system of continuous monitoring and control in real time, the quality of drinking water in the distribution of water to the city Stefanesti-Arges. Continuous transmission of data requires the water quality reveals that varies in terms of time to allow them to maintain the level required by current standards. The data acquired provide basic information regarding the temporal and spatial variations of water quality and ecosystem functioning, being in favor of water management, which, by knowing the physical processes that occur in the basin of water, may take certain decisions and in the shortest time.

Keywords: *components continue to monitor, implementing a wireless network, conductivity, resistance, temperature, level, pH, ORP*

MODELING CHEMISTRY OF POLLUTANTS

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ABSTRACT

In this moment for marine diesel engine, only NOx and SOx pollutants is limited by the international standards imposed by IMO (International Maritime Organisation), international authority for this activity domain. This paper describes the extension of the computer code make by author to simulate nitric oxide formation. Complex kinetic mechanisms are applicable only for simple flame computations (e.g. one dimensional, laminar, etc.). For real turbulent flame calculations, their use is impractical, due to the complexity of the interacting processes (turbulence, radiation, heat transfer, etc.). A model derived by systematic reduction of multi-step chemistry is used. This reduction is based on the partial equilibrium assumption of the considered elementary reactions using the extended Zeldovich mechanism.

Keywords: *NOx, kinetic mechanism, partial equilibrium*

MIXTURE FORMATION IN A DIESEL ENGINE

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ABSTRACT

That paper presents a model for atomized non-evaporating liquid spray injected in diesel engine. The method consists of a fully interacting combination of Eulerian fluid and Lagrangian particle calculations. The procedure is to represent the spray by discrete particles, rather than by continuous distributions. Each computational particle is considered to represent a group of particles possessing the same characteristics such as size, composition, etc.

Keywords: *spray, interaction, particle, probabilistic*

ECOTOXICOLOGICAL SOFTWARE TOOLS FOR ENVIRONMENTAL ENGINEERING

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ABSTRACT

Environmental modelling is a modern powerful method for evaluate and simulate the behaviour of ecosystems. Due to the progress of information and communication technology, the mathematical forms of the ecological models become software programs. Many of them are ecotoxicological models that support the environmental management by discovering and tracking the path of toxicants in nature. They include bioaccumulation mechanisms simulating the toxic effects in several trophic levels. Six ecotoxicological models are shortly presented as examples of software tools for environmental engineering.

Keywords: e*nvironmental engineering, bioaccumulation models, ecotoxicological software tools, information and communication technology.*

QUALITY PARAMETERS OF BLACK SEA WATER IN CONSTANTA CITY, 2009 YEAR

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ABSTRACT

The aim of our investigation is to characterize the water from the Black Sea, in the costal zone of Constanta North – Pescarie, during the 2009 year. The common characteristics like pH, temperature, dissolved oxygen, salinity, total hardness, calcium and magnesium hardness, have been determined. pH, temperature, salinity and dissolved oxygen were determined by potentiometric method. Calcium, magnesium and total hardness were estimated using complexometric titration.

Keywords: *Black Sea water, pH, temperature, dissolved oxygen, salinity, hardness*

RADAR IMAGE SURFACE OF A NAVAL TARGET

BALUT LUCIAN

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ABSTRACT

The tracking problem is generally solved in ARPA systems using the so called kinematic parameters such as: position, speed, acceleration, etc. In order to improve the tracking performance, non-kinematic parameters may be related to tracking problem. From this point of view the paper presents an algorithm to determine the radar image surface of a naval radar target and supplementary the aim point. The simulation results achieved by Monte Carlo method dealing with radar image surface and aim point prove the enhancement of the target detection probability.

Keywords: *Image processing, radar tracking.*

ZERO ORDER MODEL FOR AN ά - β - σ TRACKER

BALUT LUCIAN

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ABSTRACT

The paper presents the mathematical model for a tracker using radar image surface of the radar targets as nonkinematic parameter. The start point of the approach is the mathematical model of the ά-β tracker. The model is improved tacking into account the cross-section as a new dimension of the tracking hyperspace. In fact, the tracking process is moved from the geometrical R^2 space into a R^3 space {x, y, σ}, "σ" being the radar image surface.

Keywords: *Image processing, radar tracking.*

MAXIMUM LIKELIHOOD ESTIMATION FOR THE RADAR IMAGE SURFACE OF AN ά - β - σ TRACKER

BALUT LUCIAN

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ABSTRACT

Starting from the mathematical model of an ά-β-σ tracker, the present paper is focused on the maximum likelihood estimation for the radar image surface of a radar target. The mathematical model assumes that the target is moving straight lined with constant speed. In the mean time, the radar image surface of the target is considered unchanged during the tracking process. This model is usual named "zero order model". In order to develop the maximum likelihood estimation for the radar image surface, statistical hypothesis regarding the noise are made. So, both process noise and measurement noises are not correlated.

Keywords: *Filtering, radar tracking.*

NOTES REGARDING THE REDUCTION OF THE TIMED PETRI NETS TRANSITIONS

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ABSTRACT

Considering the P-timed (i.e. with timed positions) Petri Nets, these notes set determination rules for the positions timings generated by the net reduction. As an application, a practical example of a P-timed Petri Net reduction by using these rules, is given at the end.

Keywords: *Discret Event System, Modelling, Petri Nets*

FORMANTS IN IMPROVING SPEECH RECOGNITION USED IN TELECOMMUNICATIONS SYSTEMS

[1]BOSCANICI VALENTIN, [1]JURIAN MARIANA, [1]BREBEANU DUMITRU, [1]DOAGĂ GABRIEL LIVIU

[1]University of Pitesti, Romania

ABSTRACT

Formant frequencies are important in determining the phonetic content of speech sounds. Several authors have investigated formant frequencies as speech recognition features, using various methods for basic analysis, such as linear prediction, analysis by synthesis, or identifying peaks on cepstrally spectrum. In this paper we present a method to recognize formants by extracting the portion of the signal corresponding to the vowel, and calculate its first three formants. The signal is divided in blocks, the block with maximum power content is selected and normalized, the power spectral density of the signal is determined and the first three formants are extracted.

Keywords: *formants, speech recognition,voice analysis, spectral density*

WAVELET ALGORITHMS OF THE DIFFERENT IMAGE COMPRESSION USED IN TELECOMMUNICATIONS SYSTEMS

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ABSTRACT

Images are very important documents nowadays, to work with them in some applications they need to be compressed, more or less depending on the purpose of the application. There are some algorithms that perform this compression in different ways; some are lossless and keep the same information as the original image, some others loss information when compressing the image. Some of these compression methods are designed for specific kinds of images, so they will not be so good for other kinds of images. Some algorithms even let you change parameters they use to adjust the compression better to the image.

Keywords: *wavelet, image compression, plane bit encoding, SPIHT, EZW, WDR*

ON THE MAGNETIC INDUCTION RESOLUTION OF HALL MICROSENSORS

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ABSTRACT

An essential parameter in the setting up of the performance of the measurement systems that uses Hall microsensors is the detection limit of such devices. This paperwork presents the structure, the operating conditions, and the main characteristic for the Hall-plates and for double-collector magnetotransistors. By using numerical simulation, the values of signal-to-noise ratio and the detection limit for the two analysed devices are compared and it is also emphasised the way in which choosing the geometry and the material features allows getting high-performance sensors.

Keywords: *the voltage spectral density*, the noise current spectral density, *the detection limit*

EQUIVALENT CIRCUIT OF AN IRON-CORE TRANSFORMER

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ABSTRACT

If a solid core were used in a power transformer, the losses would be very high and the temperature would be excessive. For this reason, cores are laminated from very thin sheets, to reduce the thickness of the individual sheets of steel normal to the flux and thereby reducing the losses. Each sheet is coated with a very thin material to prevent shorts between the laminations.

Keywords ***hysteresis***, *techniques, power transformer*

THE DRIVE TECHNIQUES USED FOR STEPPER MOTOR

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ABSTRACT

Dedicated integrated circuits have dramatically simplified stepper motor driving. To apply these ICs designers need little specific knowledge driving techniques, but an under –standing of the basics will help in finding the best solution. This note explains the basics of stepper motor driving and describes the drive techniques used today

Keywords:. *stepper motor driving, techniques, switches, unipolar circuit*

3-PHASE ASYNCHRONOUS MOTOR PULSE WIDTH MODULATION (PWM) DRIVE

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ABSTRACT

This article presents an electronic power drive delivering a 3-phase synthetic sine-wave. The drive is activated by a single-chip microcontroller. The DMA channel of a ST9 multi-function on-chip can be diverted to a 8-bit I/O port. This allows the ST9 to perform as pattern generator. Different patterns are used to drive the 6 power switches in order to generate various voltages and frequencies.

Keywords: *DMA, microcontroller, pattens*

OPTOELECTRONIC HYDRAULIC DEVICE

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ABSTRACT

The core of this paperwork is an *optoelectronic hydraulic device* within a naval steering system. As known, the link between the wheel house and the rudder room of a ship must be electric isolated. Our proposal is to realize the link by optic fiber.

Keywords: *optoelectronic hydraulic device*

NAVAL STEERING CONTROL BY MEANS OF OPTIC TRACKS

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[1]*Constanta Maritime University, Romania*

ABSTRACT

The core of this paperwork is an *optic data transfer within a naval steering control system*. As known, the link between the wheel house and the rudder room of a ship must be electric isolated. Our proposal is to realize the link by optic fiber.

Keywords: *optic control*

NUCLEAR MARINE PROPULSION

GHEORGHE CONSTANTIN

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ABSTRACT

Nuclear marine propulsion is propulsion of a ship powered by a nuclear reactor. A nuclear reactor is a device in which nuclear chain reactions are initiated, controlled, and sustained at a steady rate. In a nuclear power reactor, the energy released is used as heat to produced steam. In most naval reactors, steam drives a turbine directly for propulsion.

Keywords: *nuclear marine propulsion 1, nuclear reactor 2, naval reactor 3, pressurized water reactor 4*

CONSIDERATIONS ABOUT THE NON-LINEARITY OF HALL SEMICONDUCTOR PLATES

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ABSTRACT

In this paper are defined and analysed the material and geometrical non-linearities and the non-linearity due to the junction field effect for magnetic sensors realised on the Hall semiconductors plates. It is emphasised in the same time the geometry and material properties influence on the devices non-linearity.

Keywords: *magnetic sensors, material non-linearity, scattering mechanism, geometrical non-linearity, junction field non-linear effect.*

RECURRENCE METHOD FOR THE ANALYSIS OF RECURRENT NETWORKS

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ABSTRACT

Recurrence method for cascade networks analysis allows a quick calculus of transfer function and a unitary treating of cascade network problems regardless of their type: low pass or high pass. The general results can be particularized.

This method finds applications in studying the RC oscillators with dephasing cells and also in studying cascade LC filters.

Keywords*:* *cascade recurrent network , transfer factor , oscillating condition*

EVENT-BY-EVENT STUDY ON RELATIVISTIC LIGHT ION INDUCED COLLISIONS

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[1]*Constanta Maritime University, Romania*

ABSTRACT

The 4π acceptance detectors make possible the observation of all charged particles and fragments produced in a single collision of relativistic nuclei. The event-by event analysis of different fluctuation measures of physical quantities is performed for light ion induced reactions at 4.5 A GeV/c. The multiplicity and transverse momentum fluctuations indicates a possible phase transition from liquid to gas in the most central collisions.

Keywords: *fluctuation, multifragmentation, nuclear matter jet.*

THE PHYSICS WITH LASERS: FROM RELATIVISTIC PARTICLE PRODUCTION TO MATERIAL PROCESSING

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ABSTRACT

The problem of relativistic particle production by ultrashort laser pulses is considered in the framework of the self-similarity approach which allows one to describe experimental results. Some problems of interaction of charged particles and radiation with hot dense plasmas are studied. Some analytical and asymptotic solutions were obtained for the problem of laser material processing which can be applied for optimization of industrial laser metal cutting regimes.

Keywords: *Laser pulses, relativistic particle production*

A MARITIME TRANSPORT PROBLEM MODELLED AND SIMULATED BY A PETRI NET WITH AN INHIBITION ARROW

BORDEA VASILICA

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ABSTRACT

Compulsory conditions to be obeyed when loading cargo on board lead to the need to establish the order of loading. To solve this problem, we resort to algorithms which establish the existence of an order and actually determine the order. The present paper proposes the graphic modelling with the help of a Petri net extended with inhibition arrows. By inhibiting some tranzitions, their performance is done when the inhibited positions are freed from tokens and the order is established. An animation block of the tokens increases the capacity to transmit the information needed to solve the problem.

Keywords: *Petri net, modelling, simulation.*

SECURITY ASPECTS IN THE e-BANKING SYSTEM

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ABSTRACT

Taking into consideration the evolution of the e-Banking services during the last few years and the constant growth of users, this paper is ment to emphasize aspects of the risk to which the e-Banking user is exposed to, stressing out the risk brought by the Phishing technique. This paper is also meant to point out the necesity of educating the users towards the best management of a case which implies this particular kind of risk or even towards the avoidment of the risk presumed by the use of e-Banking services.

Keywords: *eBanking, security, risk*

CLASSROOM ASSESSMENT TECHNIQUES- PERSPECTIVES ON AUTHENTICITY IN TEACHING MARITIME ENGLISH

CHIREA–UNGUREANU CARMEN

Constanta Maritime University, Romania

ABSTRACT

Instruction and practice of Maritime English for communication and cooperation is an important element in maritime education. A multitude of new methodologies have been explored and discussed in recent years in an attempt to approach the training and testing the proficiency of Maritime English that meets the international standards laid out in STCW. Maritime English education and technological development has been acknowledged to be an interaction relation, and they are the two main factors upon which the trainee is based. We are teaching English or studying the teaching of English, but why do we want to teach English, as opposed to other foreign languages? It is useful for us to consider this basic question occasionally, and that is the reason why we shall discuss this topic in this paper.

Keywords: *Maritime English, transformative learning, authenticity, classroom assessment techniques*..

CREDIT RISK MANAGEMENT SOFTWARE ANALYSIS

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ABSTRACT

This article focuses on the analysis of the specific features of the existing software packages for credit risk management. Credit risk management is important to financial institutions which provide loans to businesses and individuals. Credit can occur for various reasons: bank mortgages (or home loans), motor vehicle purchase finances, credit card purchases, installment purchases, and so on. Credit loans and finances have the risk of being defaulted. To understand risk levels of credit users, credit providers normally collect vast amount of information on borrowers. Statistical predictive analytic techniques can be used to analyze or to determine risk levels involved in credits, finances, and loans, i.e., default risk levels. Representative we consider the CRM^3 - The Loan Portfolio Analyzer, Commodity XL for Credit Risk™ and Rosella - Predictive Knowledge & Data Mining software.

Keywords: *credit risk management, software packages, CRM^3, Commodity XL, Rosella*

3D HAND POSITION SENSING SYSTEM

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ABSTRACT

The basic goal in this project was to make a 3D hand-position sensing system that most people can build, while still preserving some semblance of functionality. The interface is using six resistors, aluminum foil, and an ATmega168 microcontroller. The ATmega168 microcontroller haze 14 digital input/output pins (of which 6 can be used as PWM outputs), 6 analog inputs and an ICSP header.

Keywords*: capacitive sensing, RC circuit, ATmega168*

CONCERNING A NEW ITERATIVE METHOD TO SOLVE NONLINEAR PARTIAL DIFFERENTIAL EQUATIONS

DELEANU DUMITRU

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ABSTRACT

In this study, a new iterative method was used for finding approximate solutions of some partial differential equations. The proposed method is applied in a direct way, without using linearization, perturbation or restrictive assumptions. It is capable of greatly reducing the volume of the computational work as compared to Adomian's decomposition method while still maintaining the high accuracy of the numerical solution. Three examples are given to check the reliability of the method.

Keywords: *PDE, iterative method, approximate solution.*

ON A GENERALIZATION OF THE CONCEPT OF RING

DUMITRU MARIANA

Constanta Maritime University, Romania

ABSTRACT

We give a generalization of the concept of a ring which contains as particular cases the rings, the near-rings, the weak rings (given by Al.Climescu) and the infra-near-rings (given by M. Ştefănescu). First properties of this concept are developed in the paper.

Keywords and phrases: *generalized rings, ideals*.

LOOKING FOR MEANING IN SAIL DAYS

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ABSTRACT

A huge part of the English naval lexis refers to the sea, ships and shipping or sea trade. Some of the words were created locally, other were borrowed from different languages by the sons of Adam who preferred adventurous change to security in monotony. This paper is an attempt to blow the dust from an important number of sea words and give them a new life by disclosing the way they were formed. Wherever there was a story behind them, it was included both for reason of information and to make the stuff more reader friendly.

Keywords: *etymology of words, sail days*

SEA SPEAK WASHED ASHORE

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ABSTRACT

Many of the terms that sailors use have been around for hundreds of years. Some are quite recent and have joined the language of sailors who now use electronics to communicate and navigate.The historical significance of the sea is quite obvious when diving into the sea of English lexis. Many words and expressions originate from the nautical lingo and this is an excellent way of tuning a language.

The purpose of this paper is to make you well aware that many of the more colourful and expressive words in the English language were first used aboard ships at sea. In a very real way sailor talk was a dialect, a provincial language with a specific and very distinct usage. As the body of words originating in the life at sea is huge, emphasis is laid on those that do not require long explanations and catch the eye of the reader.

Keywords: *sea lingo, historical significance, arcane words*

THE METHOD OF NATURAL ORTHOGONAL COMPLEMENT IN DYNAMIC BALANCING OF FOUR-BAR LINKAGE

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[1,3], Vlora University, Albania, [2]Universià Degli Studi di Catania

ABSTRACT

The subject of this report is a new technique through which we derive the design equations for the dynamic balancing of four-bar linkage. This technique is based on method of natural orthogonal complement. So, in order to derive the dynamic equations of the mechanism we have, firstly, applied the natural orthogonal complement method. Subsequently, an optimization method for the dynamic balancing of the linkage is proposed. The conditions of dynamic balancing of the four-bar linkage are expressed as five equations and three inequalities, with nine linkage parameters. The dynamic balancing of the mechanism is formulated and solved as an optimization problem under equality constraints. The application of the new approach is illustrated through a numerical example

Keywords: *Dynamic balancing, Planar four-bar linkages, Optimum design*

RANDOM SYSTEMS WITH COMPLETE CONNECTIONS AND THE GAUSS PROBLEM FOR THE REGULAR CONTINUED FRACTIONS

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ABSTRACT

This paper present the important role that random system with complete connections played in solving the Gauss problem associated to the regular continued fractions. Hence, using the ergodic behavior of homogeneous random system with complete connections, we will solve a Gauss – Kuzmin type theorem.

Keywords: *continued fraction, Gauss' problem, random systems eith complete connections*

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ENGLISH AS A WORLD LANGUAGE

MARCU ELENA

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ABSTRACT

This paper is a short analysis of the phenomenon of English as a global language; the current spread and status of English as a first and second language internationally; English shares with the other official languages the ability to express the multiplicity of ideas and the refinements of thought that demand expression in our modern civilization. Nowadays, English has achieved the status of World English, existing as a cultural and political reality.

Keywords: *worldwide status*; *lingua franca*

ENGINEERSHIP AND COMMUNICATION IN ENGLISH

MARCU ELENA

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ABSTRACT

Communication is essential to everyone and the word has come to mean a lot of things to lots of people. This paper is designed to lay emphasis on communication in engineering areas and on the point that engineers should be good at communicating. It is often important in working relationships to know how to be assertive and to demonstrate success in group work. Good communication in engineering – written and spoken communication, in a foreign language – is a means to an end, not an end in itself.

Keywords: *difficult pairs of words: spelling, meaning and use; technical words*

RHYTHM OF THE HEART

MIHAI BOGDAN

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ABSTRACT

An overlook of the heart and how it works as a pump with an explanation of how to build a mathematical model using differential equations.

Keywords: *the heart*

PURSUIT CURVES

MIHAI BOGDAN

Constanta Maritime University, Romania

ABSTRACT

This paper will discuss the differential equations which describe curves of pure pursuit, in which the pursuer's velocity is always pointing directly toward the pursued.

Keywords: *pursuit, curve*

METHOD OF IMPROVING PERFORMANCES OF DATA ACQUISITION SYSTEMS

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ABSTRACT

Although data acquisition is a very usual technique, there are several aspects not always are taken into, as synchronization of acquired measures and evaluation of the errors that derive from this fact. The paper hereby aims to point this thing out, by mathematical determination of the necessary correction and implementing the software meant to evaluate the performances of the acquisition system. As an example, a three-phased acquisition system has been developed in order to monitor the currents and voltages on the three phases. Also there are calculated other measures, such as power and phase. Errors that affect the above mentioned, due to the different moments of time when samples are acquired, are analyzed and brought to the minimum value.

Keywords*: error, accuracy, data acquisition, improving performance.*

TRENDS IN THE 21st CENTURY MANAGEMENT

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ABSTRACT

Nowadays the managers have two important tasks: to find a solution for the present issues and get ready for the future. For a better preparation, they need to know that they may rely on the best strategic weapon of the informational era: the changing specialized company. To reject the change is a dangerous move. The companies will eventually go through a change, irrespective of the sizes, resources or quality of their offer in full operation. The excessive change, fluctuating, revolutionary is similary dangerous. The companies may not afford to keep on bearing the costs that derive from the change process – loss of the employment places and the discord among the employed people.

Keywords: *a new strategic logic, durable competitive advantage, strategic alliances, organizational hierarchy*

THE BIOLOGICAL HUMAN RYTHMS AND THE PSYCHOLOGICAL INFLUENCE METHODS TO DEVELOP PROFESSIONAL AND SPORTIVE PERFORMANCE

OPRISAN NAIE GILLES

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ABSTRACT

This presentation has as objectives to emphasize new ways to practically use the theory of human biological rythms in order to positively influence the global human performances and particular the momentary performances of the sportsmen.

This work represents the synthesis of long time researches of the author, in the space of influencing the performances of the sportsmen (as well as the navigators') to reach the highest level in the competitions or to ensure the highest professional qualities of the work aboard the ships. The novelty of these applied researches is focused on the use of computerized techniques of the bio-rythmical behavior of the human body functions to reach the goal we suggested above. The psycho-pedagogical manners we used to fulfill our task brought in some very important conclusions concerning the major influence of the psychological feature in some activities involving both the psycho-physical and intellectual contribution.

Keywords: *Bio-rythm, psycho- physical output, work capacity, psychological influence, sports performance, professional capacity, etc*

BLUETOOTH BI-DIRECTIONAL COMMUNICATION BETWEEN AN NXT ROBOT AND A PC

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ABSTRACT

In this paper we describe the implementation of a bi-directional communication between an NXT robot and a PC, using the Bluetooth protocol. We analyse and compare two approaches: a communication that is controlled by PC, using direct commands that the robot interprets and executes and a communication that is controlled by the robot, which sends data or requests to the PC. The comparison between these two approaches is done with respect to flexibility, simplicity and accuracy. With such a communication the NXT robot becomes a very powerful kit for advanced education platforms and research activities. Thus it can be used for monitoring the functionality of any robot, its accuracy in following a motion trajectory or in performing a certain action as well as for sending commands to the robot. Particularly, it is a powerful tool for mobile robots that may receive a command for a new trajectory or may interact with the PC for getting a map or updating the map on the PC when their sensors determine differences between the physical space and the map.

Keywords: *Mobile Robot, Bluetooth Communication, Data Logging, Object Recognition.*

THE NATURAL LOGARITHM OF 2

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ABSTRACT

The natural logarithm of 2 is a transcendental quantity that arises in decay problems, especially when half–lives are being converted to decay constant value $\ln 2 = 0{,}69314718055994530941\ldots$ The story of logarithms really began with the Scot John Napier in a work published in 1614. This treatise was in Latin and entitled *Mirifici logarithmorum canonis descriptio*. However it should be pointed out that the Swiss clockmaker Jost Bürgi independently invented logarithms but his work remained unpublished until 1620. Thanks to the possibility to replace painful multiplications and divisions by additions and subtractions respectively, this invention received an extraordinary welcome and spread rapidly on the Continent (in particular thanks to the enthusiasm of astronomers like Kepler). George Gibson wrote during Napier Tercentenary Exhibition: *the invention of logarithms marks an epoch in the history of science*.

Very soon tables of logarithms were published. One of the first was due to the English mathematician Henry Briggs who, in 1624, published his work in *Arithmetica logarithmica*; the tables were to an accuracy of fourteen digits and containing the common logarithm of integers up to 20.000 and from 90.000 up to 101.000. The remaining gap was completed by the Dutchman Adrian Vlacq in 1628.

Mathematicians prefer to use the so-called natural or hyperbolic logarithm of a number (denoted $\log x$ or $\ln x$, that is logarithms having base $e = 2{,}7182818284...$) and the following definitions allows to derive easily the main properties of logarithms.

Keywords: *logarithm, logarithmic function,the naturallogarithm of 2*

NAPOLEON'S THEOREM

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ABSTRACT

Napoleon's Theorem is a well-known result in classical Euclidean geometry. It has been rediscovered and reproved many times during the last century. Numerous geometric configurations associated with this theorem have revealed some unexpected aspects of the intrinsic nature of triangle geometry. Nowadays, mathematicians are still fascinated by its simplicity and elegance, and find many analogs of it in different geometric settings. Some Napoleon-like or Napoleon-type theorems have also been established. However, despite having been widely studied, it is still not clear why this theorem is attributed to Napoleon. Also, to which Napoleon should it be attributed? These questions have been debated for perhaps as long as the history of the theorem itself. In this talk, we will review Napoleon's Theorem and its related geometric configurations. We will also take a closer look at the Emperor's family to see who else may be related to this theorem. Finally, we will note some mathematicians who have either researched the origins of Napoleon's Theorem or studied its generalizations.

Keywords: *triangle, equilateral, center*

MARITIME ENGLISH – THE LANGUAGE OF THE SEA

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ABSTRACT

Nowadays it is well known all around the shipping industry that English is the main and only language that should be used in any type of maritime communication. Even so, more and more people, especially students of Maritime Universities from countries where a different language is used for teaching, have trouble understanding the importance of speaking English. Their English language should also be fluent and easily understandable by all the other members of the team or crew that are not native English.

A proper English language used on board ships can also reduce the barriers of good communication between crew members and most of all can lead to a better communication ship-to-ship and ship-to-coast. As it is well known, most of the maritime accidents happen due to human errors, these occur especially because of a bad communication as a result of not using the standard maritime English that should be well known by all the crew members of a ship.

When students that are not native English go on board ships for the first time to be Apprentice Deck Officers they find it hard to learn anything from Officers who are speaking to them in English and also these Officers are not always speaking the most correct English. That's why it is recommended that more and more courses should be taught in Universities in English especially the ones regarding all types of navigation, ship handling, ship's management and exploitation, COLREG, ISM Code and ISPS Code.

Keywords: *maritime english, deck cadet, maritime university.*

EMPLOYED AND UNEMPLYED INTERROGATIVES IN THE AREA OF MARITIME COMMUNICATION

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ABSTRACT

This paper is an attempt to combine the theoretical aspects of English interrogative sentences with their application to the maritime domain, particularly to the field of maritime communication. Thus, we will try to make a grammatical analysis of the types of interrogative sentences that appear in maritime communication, especially when there is communication between vessels and coast stations or intership and intraship communication. We will also deal with those interrogative sentences that are normally employed in every day use, but are restricted to the field of maritime communication. The fact must be mentioned that "maritime communication must be short and precise, unambiguous and simple". In all types of messages the standardised maritime language, known as the SMCP, has been developed in order to be used by seafarers on a regular basis. Therefore, the aim has been to tackle the problem of language barriers at sea and avoid misunderstandings which can cause accidents. Under the International Convention on Standards for Training, Certification and Watchkeeping for Seafarers (STCW) the ability to understand and apply the Standard Marine Communication Phrases is required for the certification of Officers of the Watch (OOW) on vessels of 500 Gross Tonnage or more.

Keywords: *interrogative sentences, questions, SMCP, maritime communication.*