I. MILITARY SCIENCES

SECTION COMMITTEE:
Assistant professor PhD, Octavian TARABUTA
Advanced instructor PhD, Gheorghe ICHIMOAEI

CONFERENCE ROOM: LI-125

1. APPLYING IPSEC IN RADIO NETWORKS FOR ENHANCED SECURITY

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Abstract: *Mobile radio networks offer many advantages and provide a certain level of security. While the standards advance, information security and user privacy is regarded as a priority for all involved parties starting from telecom vendors, mobile operators, government and ending with mobile users. In this paper we will analyze the possibility of increasing the security level of cellular networks by combining their technology with the principle of IPSEC.*
Keywords*: Information Security, Radio Networks, IPSEC, transport, tunneling*

2. „NS MIRCEA" COMPARTMENTS CLASSIFICATION AND NOISE ANALYSIS OF THE MARINE ENVIRONMENT BY ACOUSTIC EMISSIONS

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Abstract:. *This paper presents experimental conditions, equipment, and methods used to determine emissions measurements recorded sound (noise) produced by the technique and equipment on board „NS Mircea" held during march 2014 and the noise level recorded in the coastal marine environment. The results obtained allowed the classification of the vessel compartments after recorded and reported emissions standards in the field of noise and noise analysis for the coastal marine environment from different sources.*
Keywords*: noise level; noise analysis; noise emissions*

3. RAO FUNCTIONS SIMULATION FOR SEMI-SUBMERSIBILES

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Abstract: *Actual semi-submersible use various technology and systems to improve response in waves. Heave plates are used if required in offshore renewable energy projects to improve lifecycle of the onboard equipments. Using computational fluid dynamics CFD software we will present the difference resulted in Response Amplitude operator for both cases studied. The CFX solver will be programmed to perform a number of trials*

according various angles and frequencies. Results presented are unique because of the development of the three column semi-submersible.
Keywords: *Semi-submersible, CFX, wave action, RAO*

4. INFORMATION LABELLING FOR IMPLEMENTATION OF FMN CONCEPT IN ROMANIAN CIS

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Abstract: *FMN (Federated Mission Networking) concept was developed in order to ensure global rules for establishing a federation of CISs (Communication and Information Systems) organized in a Mission Network (MN) to "enable effective sharing information among NATO, NATO Nations and/or other NATO / non-NATO entities participating in operations", according to "NATO FMN Concept". One of the major aspects of the management of information in such network is the security of shared information, in particular confidentiality. In the digital environment, confidentiality of shared information regardless of its format can be assured using confidentiality labels. The paper aims to outline how NATO requirements on labeling information can be implemented in Romanian CIS, both for legacy system as well as future systems in the way that they can achieve the FMN objectives in a national MN and/or coalition MN.*

5. THE ROLE OF THE BULGARIAN NAVY IN THE MARITIME CRITICAL INFRASTRUCTURE PROTECTION SYSTEM

Cdr Nedko DIMITROV[1]
Siyana LUTZKANOVA[2]
[1] "Nikola Vaptsarov" Naval Academy, Varna
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Abstract: *The security environment of the national maritime critical infrastructure is analyzed in the context of identification of and fight against the modern security threats. The contribution of the Navy is outlined based on its tasks and capacity. The Navy's role in the national maritime critical infrastructure protection system is figured out and some future development areas are mentioned.*
Keywords*: maritime security threats, critical infrastructures protection, Navy tasks.*

6. SECURITY THREATS AND RISKS IN CLOUD COMPUTING

Sergiu EFTIMIE[1]
Ciprian RACUCIU
[1] PhD student, Military Technical Academy
[2] Prof. Eng., Ph.D., The Titu Maiorescu University, Computer Science Department, Bucharest

Abstract: *Cloud computing presents complex challenges to companies that are trying to identify and mitigate risk. This research document aims to identify the biggest concerns related to cloud adoption strategies and to provide a context in making risk management decisions.*

7. EXPERIMENTAL RESEARCH ON UNDERWATER EXPLOSION

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Octavian TĂRĂBUȚĂ[3]
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Abstract: *In this paper we underlined some aspects regarding underwater explosions – how shock waves are transmitted trough water. The first aspect*

we studied was the formation and propagation of the shock wave. The second aspect represents the formation and the gas bubble pulsation.
Key words: *underwater explosion, pulsing gas bubble, shock wave*

8. DEFINITION OF HAZARDS AND THREATS OF THE NATIONAL MARITIME AREAS

Petar KLIMOV[1]
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Abstract: *The report shall identify the hazards and the threats acting on the security and safety of the territorial waters considering the time-spatial impact on the national maritime areas.*
Keywords: *hazards and threats, security and safety, maritime areas*

9. EXPLORING THE POSSIBILITIES OF A SELF-REGULATING SDN CONTROLLER

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Abstract: *As the number of networked devices increases, traditional routing algorithms tend to be non-optimal for mesh topologies. With the power of controlling the data flows in Software Defined Networks, a controller can implement a dynamic communication path for each flow. If, in the same context, the controller would also implement a history evaluation algorithm combined with a genetic search method, it could achieve a dynamic resource allocation that tends to an optimal solution. This paper proposes the implementation of such a system on top of an Open Flow controller.*

10. GENETIC TECHNIQUES APPLIED IN ACTUAL NETWORK MANAGEMENT

Rares MANIU[1]

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Abstract: *Actual IT medium and future trends in this domain encourages the development of large, high - evolutive networks, with a high heterogeneity, who must meet a number of requirements in terms of maximum throughput, minimum delay, loss, delay-variation. The idea of mobility for everyone, using a large number of devices is becoming normality and change the way to manage networks. All of these characteristics, combined with anarchic scalability and event-driven architecture, transform network management in a multicriteria optimization problem. This article proposes a genetic algorithms way to realize a adaptive, autonomous management of such networks, with a efficient resources allocation, a efficient utilization of links and QoS guarantee*.

11. HEAT TRANSFER AND THERMAL STRESS ANALYSIS OF WATER COOLING JACKET FOR ROCKET EXHAUST SYSTEMS

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Abstract: *The article focuses on the heat transfer and thermal stress analysis of water-jacket cooling for rocket exhaust systems. Due to the large number of tubes used in the water-jacket cooling adapters, a full geometry 3d analysis of fluid flow, heat transfer and stress would be prohibited in terms of computational time and hardware resources. Moreover, a coupled fluid-thermal-stress analysis of such a complex geometry would cause an even greater number of numerical problems. Consequently, equivalent thermal and mechanical properties were calculated in order to decrease the resource needed to evaluate the rocket exhaust system. Using a constant*

heat flux for the interior wall (value estimated numerically from a previous full 3D exhaust gas flow computation) and a constant free air convection heat flux coefficient for the exterior wall, the equivalent heat transfer coefficient was computed based on the total heat transfer rate through the interior and the exterior walls assuming zero heat flux through the symmetry walls. An equivalent layered shell material is defined in order to model both the fluid and the structural domain of water-cooling adapter. The mechanical and thermal characteristics of this equivalent material are defined based on the simpler fluid-thermal-stress analysis of just one water cooling tube. Finally, some applications are presented to model the thermal stress problem of the full water-jacket cooling adapter.

12. SOME ASPECTS OF THE MODERNISATION NATIONAL LAW IN THE EUROPEAN NAVAL AREA

Ioan Gabriel MOISE[1]
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Abstract: *Water is life on this planet, in a proportion of decisive fundamental. Over 70% of the world is constituted by the planetary ocean, and more than 90% of international trade is done by sea. Approximately 70% of the world population lives less than a hundred miles of oceans and seas.*

The Europe's maritime interests are mainly related to the welfare, prosperity and security of its citizens and communities. About 90% of the EU's foreign trade and 40% of its internal trade relies on maritime transport. The EU is the third largest importer and fifth largest producer of fishery and aquaculture worldwide. More than 400 million passengers pass through EU ports every year.

EU is based on open and secure seas and oceans in order to be able to operate free trade, transport, tourism and ensure ecological diversity and economic development. The lack of protection against a wide range of threats and risks sea, seas and oceans can become arenas for international conflicts, terrorism or organized crime.

In this context, the European Union is under pressure to take more measures to act more quickly and with fewer resources, by strengthening cooperation between different sectors and national authorities. As the increasing interconnection between internal and external dimensions of maritime security, it is necessary that all parties share the same goals and the same efforts to achieve coherence between sectoral and national policies and to allow civil and military authorities to react effectively together.

The Black Sea regional constellation has substantially changed in recent years and will continue to evolve. In these circumstances, regional cooperation initiatives of the EU would usefully complement the wide range of activities currently undertaken at bilateral and sectoral levels. The EU presence in the Black Sea region opens up new perspectives and opportunities. This requires a more coherent, long-term enabling fully seize these opportunities, to bring increased stability and prosperity in the region. A greater EU involvement in the Black Sea regional cooperation will contribute to this objective.
Keywords: *European Neighbourhood Policy, maritime security, maritime interests, threats, piracy, flag, maritime security strategy, cross-border cooperation (CBC), Common Security and Defence Policy.*

13. THE EXPERT SYSTEMS ANALYSIS USING THE CONCEPT OF BIG DATA AND CLOUD COMPUTING SERVICES

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Abstract: *This paper presents the general characteristics of expert systems for process data analysis in real time and secure information systems using Cloud computing and Big Data technologies. The cyber security in cyber war must be redefined considering the collisions of IT&C with the informational risk.*
Keywords: *Big Data, Cloud computing, IOT, analysis,cyber security*

14. CRITICAL INFRASTRUCTURE PROTECTION – CURRENT SECURITY SECURITY CHALLENGE FOR ROMANIA

Ionel Claudiu PASARE[1]
[1]PhD, „Mihai Viteazul" National Academy, Bucharest

Abstract: *The beginning of the twenty-first century is characterized by substantial changes in the parameters of classical analysis of the evolution of international security. Unique feature of the new types of risks and threats (international terrorism, proliferation of weapons of mass destruction,*

transnational organized crime, cyber-crime, etc.) is the fact that it can be addressed and managed separately, but as part of comprehensive development and interdependent. One of the main features of the late twentieth century is the transformation of the globalization process which has radically transformed the world in the sense of interdependence between states exponential multiplication of the international system. Certainly, critical infrastructure, influence the approach to classical geopolitical concepts. Romania has an important network of critical infrastructures and their protection is an strategic objective for our national security.

15. THE ROLE OF THE NORTH ATLANTIC ALLIANCE IN THE CRITICAL ENERGY INFRASTRUCTURE PROTECTION

Ionel Claudiu PASARE[1]
[1]PhD, „Mihai Viteazul" National Academy, Bucharest

Abstract: *The North Atlantic Alliance considers that energy is nowadays an indispensable part of security. Hereby we cannot talk about security without analysing the energy side, with all its implications, including the critical energy infrastructure. But the security of "critical infrastructure" is affected by vulnerabilities, risks, threats, failed states and aggressions. Finding out vulnerabilities determine the identification of threats under which the terrorist attacks are imminent.*

Taking into account that NATO and EU share the same vital security concerns, an enhanced co-operation in the field of critical energy infrastructure protection may constitute one of the common projects of practical and efficient co-operation development.

16. SECURITY THREATS AND RISKS IN CLOUD COMPUTING

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[1] Prof. Eng., Ph.D., Military Technical Academy - Electronic, Information and Communication Systems for Defense and Security Doctoral School
[2]Inf. Ph.D. Student Military Technical Academy - Electronic, Information and Communication Systems for Defense and Security Doctoral School

Abstract: *Cloud computing presents complex challenges to companies that are trying to identify and mitigate risk. This research document aims to identify the biggest concerns related to cloud adoption strategies and to provide a context in making risk management decisions.*

Keywords: *Security, Cloud, Threats, Risks, Strategy*

17. A POSTERIORI ANALYSIS OF THE BULGARIAN-ROMANIAN TACTICAL EXERCISE "DIRECT THREAT 2014"

Nikola STOYANOV[1]
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Abstract: *Evaluating the effectiveness of the use of modeling and simulation (M & S) in the training of naval cadets is a vital part of tactical preparation. Placing the proper tasks in preparation training process is the only way to meet the new challenges related to the increasing possibilities of the modern naval weapon systems and naval tactics. The posteriori analysis is a means of helping to assess the quality of individual and / or group simulator training. At the end of 2014 a Bulgarian-Romanian tactical exercise, "DIRECT THREAD" 2014 was conducted. The purpose of this study is to apply a posteriori analysis to the training carried out at the "Naval Tactical Simulator" and "Ship Bridge" navigation simulator in order to show strengths and weaknesses of the exercise whose idea is to be an inherent part of preparation of the Bulgarian and Romanian naval cadets.*
Keywords: *posteriori analysis, modeling and simulation, naval tactics*

18. BIOMIMETIC APPROACH TO UNDERWATER CURRENT CORRECTIONSFOR AUTONOMOUS UNDERWATER VEHICLES' INERTIAL NAVIGATION SYSTEMS

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Abstract: *Autonomous Underwater Vehicles' (AUV) guidance on a desired course is done by two main navigation systems, acoustic and inertial. Acoustic navigation systems depend on fixed reference points - acoustic transponders laid on the sea floor in the case of long baseline (LBL) grids - while the inertial navigation systems (INS) are based on integration of own accelerations and velocities in order to compute a dead reckoning path of the AUV. Both methods pose, respectively, either technological/operational constraints or a low accuracy of navigation on the preset trajectory, due to a hydrological factor having a great impact on the AUVs motion: underwater currents. In the INS navigation case, which relies only on internal signals as input of computing the estimated course, underwater currents add a still undetectable error for the present navigation sensors.*
The authors propose a method of underwater current correction for INS navigation based on a biomimetic approach. Fish and aquatic mammals are using hydrodynamic reception, i.e. detection of subtle changes of water pressure around them that signal the presence of a moving body (friend or foe) within their sensorial envelope. Fish use their lateral line as a pressure sensing system, allowing them to react in changing their course for attacking pray or social schooling. By considering that the lateral line system can also explain navigation of fish during migrations, the authors present a study of how the pressure distribution differences on the AUV's body can measure the speed and incidence of an underwater current hence satisfactorily trigger current corrections of INS-based AUV navigation.

19. IMPLEMENTATION OF THE OODA-LOOP IDEA ON DESIGN OF OFFSHORE OBJECT SECURITY ZONES

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Abstract: *Security zones with temporary dimensions are required for establishing trustworthy protection of an offshore object. Their boundaries are determined according to the threat`s evolution stage. Implementation of the OODA-loop contributes to the optimization of the reaction time.*
Keywords: *control, maritime security, offshore industry, OODA-loop, reaction time.*

II. NAVIGATION AND NAVAL TRANSPORT

SECTION COMMITTEE:
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CONFERENCE ROOM: LP-11

1. MONITORING STABILITY OF THE SHIP USING HARDWARE AND SOFTWARE EQUIPMENT

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Abstract: *"The boat is safe in the harbor; but boats were not made for this." quote* ***John A. Shedd***

The ship performance are often given by the ability to "survive" the problems that may arise far from shore. Both, passengers and loads, may suffer if ship stability is endangered. The main goal now is to improve and secure shipping using the latest technology in terms of monitoring and recording the optimum operational parameters of a vessel.

Computer-assisted calculation units used for monitoring ship stability is not a requirement in default ships equipment, but is becoming increasingly useful use for new technologies to prevent and solve problems that arise due to the instability of the vessel. We are talking about equipment that will not replace existing measures and technology but will work together to supplement the information parameters about stability of the ship at any time during navigation. Improving monitoring systems throughout the transport loads can be a difficult operation on a Heavy ship, computer-assisted systems can however perform calculations in record time and can provide extra safety measures for the entire ship (including crew and passengers).

Keywords: *safety of the ship, computer-assisted system, technology development.*

2. SECURING MEASURES FOR ON BOARD GOODS (MOORING, ANCHORING, STACKING)

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Abstract: *Shipping operators require special care on securing goods and persons on board. Long journeys and harsh natural conditions very frequently lead to unwanted accidents. Hence, a well-established preventive behavior on board, proper anchoring and securing cargo in containers easy to handle, improves the chances for goods to reach the destination "unharmed".*

Unfortunately, there is a growing number of incidents and loss of cargo aboard ships lately. Losses in large vehicles, cars, machinery, steel pipes, steel structures, timber, freight containers, dangerous chemicals.
Goods must be stackable so that the ship moored and shipboard personnel should not be exposed to any risk. It is a first priority for mooring and safe stacking and good planning, execution and supervision of the loading and unloading.

Lashing and stowage aboard ship are extremely important factors for the safety of life at sea. Inadequate mooring of goods led to many accidents and even loss of lives both during voyage and during loading and unloading operations.
Keywords: *shipping transport, lashing, stowage, mooring, anchoring.*

3. BROOKES BELL MANOEUVRING SIMULATOR (BBSIM)

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Phil YORK
Christie PINTO
[1]Brookes Bell Group, SCOTLAND

Abstract: *BBSIM was developed by Safety at Sea in 2009. In 2010, the first BBSIM version (at that time called ManSim) was applied in two commercial contracts of Safety at Sea for an incident analysis and for berthing and unberthing manoeuvring simulations.*

In 2011, it was applied in the frame of the European project SAFEPORT for trajectory optimization, at Naval Architecture and Ocean Engineering Faculty/Department of Strathclyde University, Glasgow.

4. THE CARGO EVOLUTION TRANSPORTATION ON ROMANIAN WATERWAYS CERNAVODĂ – AGIGEA AND POARTA ALBĂ – MIDIA NĂVODARI

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***Abstract*:** *The Danube – Black Sea Canal, third in the world after Suez Canal and Panama Canal, reduces with over 400 km the cargo route from the Black Sea to the center of the Europe and approximately 4000 km for the routes from Australia and Far East. The canal is part of the European project Rhin-Main-Danube and enable the interconnection of hundreds of inland harbor situated between the North Sea and Black Sea.*

The canal presents not only a great economic importance, being able to take about 80 million tons of cargo annually, but also a social meaning. It has a major contribution to the Romanian southeast farms, assure an expansion of irrigation, therefore implementation of the agricultural development program on modern principles, facilitate the supply of drinking water and industrial riverside villages.
Keywords: *Danube canal, social meaning, expansion*

5. THE INFORMATION MANAGEMENT FOR MARITIME ACCIDENT RECONSTRUCTION USING VOYAGE DATA RECORDER SYSTEM

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Abstract: *In the recent year it has increased the volume of maritime transport, so that led to the involvement of more ships in the industrial sector, increasing maritime accidents, of which some were even causing losses of life. To face this issue and to increase security on the sea, the International Maritime Organization (IMO) has agreed to implement a data recorder on board, similar to the black boxes used on aircraft, called "white boxes". This paper has the purpose to explain the system VDR (Voyage Data Recorder) for a casualty. Analysis was performed in a case study on a*

marine casualty and the results of its reconstruction were concluded that the VDR system can be optimized.
Keywords: *maritime accidents, security, VDR, reconstruction.*

6. THE MARITIME DIMENSION OF ROMANIAN SECURITY

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Abstract: *Romania's integration in NATO and the European Union gave its coastal water boundaries a new transnational, Euro-Atlantic dimension. Practically speaking, Romania emerged from the "gray zone", bringing the eastern flank of the alliances in close proximity to the "frozen conflicts" around the Black Sea coast. Any coastline border modifications in the Black Sea - like the recent annexation of the Crimea peninsula to the Russian Federation - will likely generate disputes regarding the proper delineation of continental waters and economic zones that area exclusive to the Black Sea. The energy resources in Romania's continental waters can actually transform the country in an important exporter of natural gas to Europe. Romania can become an important player in the energy market, as an alternative to the Russian energy offerings. The exploitation of its energy resources requires the careful placement of off-shore drill equipment, installation of underwater gas infrastructure, and development of proper security measures to insure the integrity of the entire system from an environmental and strategic standpoint, all this in addition to offering protection from all the other known security challenges for the area. The Romanian political system will therefore have the important task of creating the proper legislation for the maritime energy security and facilitating the implementation of the monitoring systems, underwater security, measures needed for the smooth and safety operation of off-shore drilling, distribution activities of natural gas and not only.*
Keywords: *conflicts, underwater has infrastructure, off-shore drilling equipment, security, energy security, underwater security.*

7. MODERN AUTOSHIP ANALYSIS FOR „ACADEMIC STAR" CUTTER STATUS

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Abstract: *The present paper is based on the first analysis of shape for the „ACADEMIC STAR" Cutter. Measurements in situ were used to 3D draw the cutter forms in AUTOSHIP software. Results from Autohydro component are analyzed and presented related to actual ship construction and stability requirements. Based on this analysis the ship owner can decide if the ship is according to actual nautical and stability requirements.*
Keywords*: Autoship, Cutter, Autohydro, Stability.*

8. STABILITY ANALYSIS OF MODERN OFFSHORE SEMI-SUBMERSIBLES

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Abstract: *Based on a tri-column semisubmersible Autoship analysis will be done on different designs. WindFloat project values are used to draw 3D in AUTOSHIP software. Results from Autohydro component are analyzed and presented related to actual offshore construction and stability requirements. Societies of Classification are imposing rules regarding safety and ways to prevent accidental situations. Based on this analysis the semi-submersible*

owner can decide if the tri-column semi-submersible is according to imposed stability requirements during operation.
***Keywords**: Autoship, Offshore semi-submersible, Autohydro, Stability.*

9. ASSESSMENT OF APPROXIMATE ERROR VALUES USED IN ASTRONOMICAL NAVIGATION FOR POSITIONING

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***Abstract:** Finding the vessel's position on the terrestrial sphere represents the most important activity carried out by the officer of the watch onboard, in order to ensure the safety of the vessel, crew and cargo. The ship's position can be determined by several methods such as: coastal observations, astronomical observations, radar or through data provided by satellite global positioning systems. In order to determine the position of the vessel with astronomical observations, the officer of the watch uses a series of nautical tables and formulas of spherical trigonometry applied to the spherical triangle of position. The approximate values accuracy of the trigonometric functions used in computing can directly affect the position determined by astronomical observations. The purpose of this paper is to evaluate the errors of approximate values of the trigonometric functions used by the officer on watch for fix positioning with astronomical observations.*

10. SIMULATED PROPELLER WALK ON A 13.300 TEU CONTAINER SHIP

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Abstract: *Maritime transport continues to be the main pillar of the global economy as the largest amount of all raw and processed products is made through it. The increasing number of vessels led to the increase on maritime traffic thus increasing the risk of naval accidents. The main factor of all naval accidents remains the human factor, being present in about 80-90% of the cases.*
The movement of a ship is made under the influence of the propeller unit and steering system. Knowing the characteristics, of the ship, of steering and propulsion, represent one the main responsibilities for the officer in charge with the navigational watch. The aim of this paper is to present the influence of the propeller upon the ship maneuverability by simulation techniques.

11.PASSIVE ACOUSTIC UNDERWATER NOISE MEASUREMENTS IN CONSTANTA PORT AREA

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Codruta PRICOP[3]
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Abstract: *Generally, underwater noise measurements are made to monitor the impact of commercial and military activities in oceans and seas and to provide information for vessel identification. In this paper, the authors analyse the noise produced by ship traffic at the entrance of Constanta harbour. Comparisons between background noise and ship noise are made, and an analysis of the propagation of noise produced by each measured ship is made regarding the distance between ship and hydrophones (CPA – closest point of approach). Also, we discussed about the characteristics of ship's noise spectral components and the dependence of sound propagation in port aquatorium on these characteristics. The recorded signals are*

thoroughly analysed by means of FFT and Wavelet for low and mid frequency bands. A few conclusions and remarks are made in the end about spatial distribution and level of underwater sound in entrance of Constanta harbour which is obtained from measurements by superimposing one or more noise sources in the area of interest.
Key-words: *ship noise, ship characteristics, underwater source spectra*

12. SIMULATION OF SHIP TO SHORE INTERACTION IN SHALLOW AND NARROW WATERS

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Abstract: *In recent years research efforts in ship hydro mechanics are devoted to the practical navigation problems in getting larger ships safely into existing harbors, which are usually characterized by narrow and shallow waters. This paper presents a case study of ship to shore interaction when a bulk carrier passes at different speeds through a narrow waterway in Suez Canal. The trials were conducted using NTPRO 5000 navigational simulator and it was studied the ship to shore interaction and also ship squat phenomenon, which, in general, appears in shallow waters, but with a more pronounced effect on canals passage. The results analysis showed that the greater the speed the more pronounced the bank effect is, which translate into an earlier swing of the ship towards opposite bank, an increased final ship-bank distance and a significant yawing moment causing a visible sway. Also it was observed that the ship motion isn't related to the under keel clearance and if the speed is too big, an uncontrolled maneuver could lead into a collision with the opposite wall of the canal. The paper can be useful for maritime officers, masters and pilots, who must take into account ship to shore interaction effects when maneuvering in restricted navigation conditions, in order to prevent any accidents.*
Keywords: *interaction, squat, shore, canal, simulation.*

13. METHODS FOR ROUTE PLANNING IN GREAT CIRCLE SAILING USING ELECTRONIC NAVIGATIONAL CHARTS

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***Abstract**: Nowadays modern navigation implies the use of ARPA radars, AIS receptors or satellite communications connected by an Integrated Bridge System, but the most important navigation aid is ECDIS. For planning and monitoring of ship's route, officers often use electronic navigational charts. This paper presents a comparison between rhumb line sailing and great circle sailing calculations used for route planning in ocean passages and also emphasises the differences that occur between these navigational paths when they are represented on electronic navigational charts.*

III. MECHANICAL ENGINEERING SCIENCES

SECTION COMMITTEE:
Professor, PhD. Eng. Beazit ALI
Professor, PhD. Eng. Anastase PRUIU

CONFERENCE ROOM: EP-26

1. EFFICIENCY STUDY OF THE HYDRAULIC DISTRIBUTOR WITH DRAWER

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Abstract: *This paperwork studies the efficiency of the hydraulic distributor, analysing the liquid running through the controller, the variation of the pressure and its speed for various forms of the ring valve controller.*

2. RESEARCHES UPON THE CAVITATION PHENOMENON OF THE CENTRIFUGAL PUMPS

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Abstract: *The main problem of the hydrodynamics of cavitation implosion of a single bubble, consists in pressure and velocity fields determination, including the collapse velocity of the bubble wall.*
The bubble surface is a discontinuity surface, and the overpressure produced by a bubble collapse are very great (many thousands bar) facts that suggests the opportunity of the distribution theory use.

We use from in distribution of the equations for a non viscous, incompressible liquid. Using the Dirac filtering property some integral equations were obtained, giving the liquid velocity and pressure fields due to the bubble's implosion.

By analysis the theoretic and experimental phenomenon it establish the implicit function which describes this phenomenon. By application the Π *theorem for this implicit function it finds the criterion equation of phenomenon.*

Depending on operating condition various cavitation patterns can be observed on a body surface as travelling bubbles, attached sheet cavitation, shear cavitation or vortex cavitation. Leading edge attached partial cavitation is commonly encountered on rotor blades or on hydrofoil. It corresponds to the case for which a vapor cavity is attached in the vecinity of the leading edge and extends over a fraction of the foil surface. It generally takes places at incidence angles for which a leading edge pressure peak occurs and reduced below the liquid vapor pressure. At the early phases of development, leading edge partial cavitation is steady.

3. INFLUENCE OF FRICTION IN THE DRAWING A CYLINDRICAL PART STEEL – PART I

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Abstract: *In this paper are analyzed the variation of deformation, the stresses of flow, the wall thickness in case of drawing process simulation conducted under two conditions: without the use of a lubricant used in liquid form. The analysis aims to establish the influence of friction on the quality of the drawing steel piece.*
Keywords: *punch, die, A steel piece*

4. ASPECTS OF OBTAINING COMPOSITE MATERIALS

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Abstract: *The fiberglass reinforced plastics are characterized through an excellent ratio strength/weight, a good heat insulating and the sound-proofing at ship's side, the fire proofness, the fatigue endurance limit, the resistance to shock, the water degradation resistance. Those features suggest for the shipbuilding in the military zone and civil.*
Keywords: *the fiberglass reinforced plastics, the shipbuilding*

5. EFFECTS OF SULPHATE REDUCING BACTERIA ON THERMOSETTING POLYMERS/ZN COMPOSITE COATINGS

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Abstract: *Ships and barges are exposed to a lot of corrosion environments, an important role being microbiologically induced corrosion that attack ballast tanks and void spaces, cargo holds in commercial ships. The rate of corrosion increased quickly and it necessary repair and replacement of structural details, incurring very considerable cost penalties due to direct repair costs and to delay costs. Sulphate Reducing Bacteria is a group of phylogenetically diverse anaerobic microorganisms that were first discovered by Beijerinck in 1895. At present, 14 genera have been identified, the two most established genera of SRB being Desulfovibrio and Desulfotomaculum. Corrosion induced by Sulphate Reducing Bacteria has made high losses in shipping and gas industry every year. The paper evaluate the attachment effect of Sulphate Reducing Bacteria and the variation of roughness values before and after the attachments on the surfaces of zinc and zinc – thermosetting polymers composite coatings*

obtained by electro co-deposition. For testing it was used two types of thermosetting polymers as disperse phase in zinc matrix. It was used zinc matrix because this metal is the most widely used material for protection of steel against corrosion. The success of using zinc as a coating on steel can be attributed to its sacrificial nature, low cost and ease of application. Investigations of the surfaces were made using atomic force microscopy method and epifluorescence method. Sessile bacteria on samples were stained with 4', 6-diamidino-2- phenylindol (DAPI). After testing it was observed that attachment of bacteria and the roughness of the composite coatings surfaces are lesser than on zinc surface. By decrease the roughness the pitting attack will be better controlled. Those facts indicated that the thermosetting polymers/Zn composite coatings are more resistant to the attack of microorganisms like Sulphate Reducing Bacteria.
***Keywords**: Sulphate Reducing Bacteria, thermosetting polymers, composite coatings, atomic force microscopy, roughness*

6. THE ACTUAL TRENDS IN REDUCING THE MARITIME TRANSPORT ASSOCIATED EMISSIONS

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***Abstract:** The maritime transport is facing a new and complex environment, which is launching both challenges and opportunities. Among all these existing challenges, the climate change is one of the most important and it's coutermeasures are rising most of the problems, both on a political level and in the day by day life. Due to the obvious developing trends of the marine technology, the ships are rapidly becoming one of the biggest pollution source; the air pollutants generated by maritime transport activities are signifincantly contributing to the increased concentration of the air pollutants.The international bodies are defining the following piers in regulating the emissions level in the maritime transport which comprises several sets of rules and regulations in the field, identifying the funding sources for the required activities, research and development activities in*

the field of the green techologies and energy efficiency, developing a safety culture towards the marine environment. The companies which are activating in the maritime transport industry will have to align to these trends.

Keywords: *Pollution, Emissions, Marpol, Sustainable, Eco-ship.*

7. PERFORMANCE ASSESSMENT OF SOLAR THERMAL COLLECTORS IN VARIOUS SEA STATES

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Abstract: *In the paper, performance assessment of the flat plate solar thermal collectors installed on the merchant vessels is analyzed. Performance evaluation of the collectors is made by taking into account solar radiance and two significant motions of the vessel: roll and pitch. The amplitude of the roll and pitch angles of a general cargo ship was identified for a degree between 1 and 5 on International Sea and Swell Scale (Douglas scale). For relevance, the height of the waves was considered between 0.1 and 4.0 meters. The simulations of ship motions were carried out using OrcaFlex, a marine dynamics program for static and dynamic analysis of a wide range of offshore systems. Further, considering permanent reorientation of solar collectors due to roll and pitch motions of the ship, a performance assessment is carried out. This is done in order to determine the influence of the roll and pitch motions on the solar collectors performance under the solar radiation quantity that reaches the collectors surface.*

Keywords: *ship, flat plate solar collector, pitch and roll motion, efficiency*

8. PROSPECTS FOR INCREASING SUSTAINABILITY OF SHIPPING THROUGH THE NEW TRENDS IN THE USE OF NATURAL LIGHT INDOORS

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Abstract: *In this context, the paper aims to assess and warn the impact of using new solutions and future possibilities related to artificial lighting of working spaces, technical spaces and living spaces on board of merchant vessels.*
Key words*: natural lighiting, merchant vessels.*

9. APLICATION OF THE DIRECT METHOD TO OTTO AND DIESEL IRREVERSIBLE CYCLES

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Abstract: *The Direct Method from Thermodynamics with Finite Speed (TFS) studies the irreversibility's (internal and external) produced during operation of real thermal machines, through progressive analysis and direct integration of the First Law of Thermodynamics, combined with the Second Law of Thermodynamics for processes with Finite Speed, for each process of the cycle. Thus are obtained analytical expressions for the Efficiency* ***(****for Power cycles****),*** *respectively COP (for Refrigeration Machines and Heat*

Pumps) and Power (produced, respectively consumed) function of the speed of the processes and of the functional and geometrical parameters of the machine. This paper presents the Main Moments in the Development of Thermodynamics with Finite Speed and Direct Method "invented" in its framework. Recent Progresses in Application of the Direct Method to Otto and Diesel cycles are presented.

10. CONSIDERATIONS ABOUT SHIP CLASSIFICATION SOCIETIES RULES CONCERNING NAVAL PROPULSION SYSTEMS MONITORING GAS TURBINES FOR SAFE OPERATION CONDITIONS.

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Abstract: *The work has been done on the study of bibliography and experience in the operation of the doctoral students in the field of gas turbine power plants. The paper highlighted that rules of ship classification societies concerning the main design and functional parameters of gas turbine integrated in naval propulsion systems, their design and construction, and a brief overview of the role of companies classification.*

11. CONSIDERATIONS ABOUT SHIP CLASSIFICATION SOCIETIES RULES FOR INSTALLATION ON BOARD OF NAVAL PROPULSION SYSTEMS WITH GAS TURBINES

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***Abstract**: The work has been done on the study of bibliography and experience in the operation of the doctoral students in the field of gas turbine power plants.The paper highlighted that rules of ship classification societies concerning of the arrangement of gas turbine propulsion plants to ships, and a brief overview of the role of ship classification societies.*

12. THE NITROGEN OXIDE AND SOOT REDUCTION USING WATER/HEAVY FUEL OIL EMULSION

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***Abstract:** The soot and oxides of nitrogen (NO_x) emissions from marine engines are significant on a global level. Soot and oxides of nitrogen emissions participate in the formation of photochemical smog and acid rain. The challenge is to control soot and O_x emissions without increasing fuel consumption and smoke. There is much interest in the potential of utilizing oil/water emulsion in liquid-fueled combustors for pollutant reduction and enhanced fuel economy. In this work it is preferred to emulsify by using an ultrasonic method in a hydrodynamic generator, because the fuel and water produce a very finely dispersed emulsion. The graphic transposition of the processes of fuels and oil/water combustion is defined by the combustion graphology, developed in a simulator. The graphic representation of the combustion processes development for a droplet of liquid fuel used in the industrial combustion may be made by means of the so-called "combustion oscillogram".*
***Keywords:** water/heavy fuel soot nitrogen oxide reduction*

13. THE COMBUSTION OSCILLOGRAMS OF WATHER-HEAVY FUEL OIL EMULSION DROPLET

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Abstract: *The vaporization and combustion characteristics of a marine heavy oil-water emulsion droplet are investigated with graphological method. The combustion graphology of fuel oils is defined as a new technical and scientific field which deals with the graphic transposition of the processes of fuels combustion development in a simulator. Thus, it is easy to establish the ignition-combustion characteristics, including the laws that govern their changes depending on the combustion conditions and fuel specifications.*
Key words: *marine oil-water emulsion, vaporization, combustion, graphological method.*

14. ACCIDENT SEQUENCE PRECURSORS IN RISK MANAGEMENT FOR OFFSHORE INDUSTRY

IONUȚ DRAGOȘ NEAGU [1]
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Abstract: *Active and aware risk management analysis of increasing offshore constructions development into the context of international trend in exploiting oil and gas reserves in high water depth, wind and wave power. Combining accident sequence precursor (ASP) from nuclear industry with probabilistic risk assessment (PRA) helped by innovative analytic hierarchy process (AHP) proposed by T. Saaty a software tool for evaluating risk is developed. Competent authorities in risk management (like MWS) could beneficiate from a standardised tool for risk evaluation and decision making used to maintain risk as low as possible at all times.*
Keywords: *risk analysis, risk management tools, offshore constructions, accidents*

15. CONSIDERATIONS REGARDING THE STRUCTURAL MODIFICATIONS OF A 110.000 GRT PASSENGER SHIP IN ORDER TO IMPLEMENT THE ANNEX VI MARPOL REGULATIONS

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Abstract: *The new regulations regarding the SOxemissions involves implementation of new technologies onboard ships. This usually means redesigning local structures in order to be able to support the increased loads induced by new equipments. The new structure has to be check in order to see if it respect class requirements. This paper is a good practice example of a structural check for a redesigned structure in order to support new added scrubbers.*
Keywords: *Strctural analysis, MARPOL, Class requirements*

16. PORTABLE DEVICE OF FIRE SIMULATION ON BOARD MARITIME AND RIVER SHIPS

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Abstract: *The fire consists in the phenomena of burning initiated by a well-defined cause and triggered with or without the will of man. Being out of control, it produces damage and disruption and thus, it needs an act of a fire-fighting intervention with appropriate means. In order to prepare the crew for fast elimination of a possible fire on board a maritime or river ship, it takes a series of active measures which consist in the personnel's related periodic training on board under specific conditions. In this regard, a "portable mode simulation of fire" was built, with the stated goal of modernizing the vitality polygon of the Navy Academy to increase readiness, training and testing of embarked students and staff in a potential fire fighting. Portable fire simulation mode can be used on board of any ship, sea or river, so that the crew can be properly and specifically trained, even on ship it serves.*
Keywords: *fire fighting, fire, ignition, portable, device*

17. STUDY ON QUAY MOORING CAPABILITIES OF A CLB

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Abstract: *When loading heavy payloads, during the several offshore operations, there is necessary to prove the capabilities and reliability of the envisaged systems for the activity itself. One of the biggest concerns that are considered by the Marine Warranty Surveyors is the mooring capability of a vessel supposed to receive and furthermore transport the offshore equipment.The present article is aiming to present a study on the quay mooring analysis of a cable laying barge, which is supposed to receive a 8km batch of submarine high voltage offshore cable.*
Keywords: *cable, laying, barge, mooring*

18. COMPARATIVE ANALYSIS ON A CLB STATION KEEPING IN REGULAR AND IRREGULAR WAVES

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Abstract:*The offshore industry gained a great development level in the past years, due to the necessity of sustainable and clean energy. This trend is*

determined by the new development and installation of more and more offshore wind farms. In the great effort of commissioning an offshore wind farm, one of the players will always be Cable Laying Vessels / Barges, which are required to lay submarine high voltage cables in the nearshore area. In order to prove the capabilities of the envisaged barge to lay the cable in the required conditions, there are carried several engineering studies, which are aiming the hull behavior in the most unfavorable conditions. One of the most important studies is represented by the station keeping studies. The article is aiming to present a comparative analysis between two simulation scenarios, by considering regular and irregular wave train.
Keywords: *cable, laying, barge, wave, station keeping*

19. THE KINEMATIC OF ENGINE DRIVE MECHANISM. CONSIDERATIONS ON BOXER ENGINE CRANK CONFIGURATIONS INFLUENCE ON THE ENGINE EQUILIBRATION

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Daniel MARASESCU[2]
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Abstract*: In the present paper are presented in the first part some theoretical aspects linked by the engine kinematics and defined the dimensional relationships for the kinematic engine drive mechanism, submitted graphically and analytically.*
This are proceeded in the second part with considerations on crank configurations influence on the engine equilibration in general and extensively for BOXER engine configurations. Following these questions, a great importance is attached for the study of the advantages and disadvantages of using the BOXER configurations in naval engines.
Keywords: *kinematics, crank configurations, engine equilibration, BOXER engine.*

20. TECHNICAL AND OPERATIONAL MANAGEMENT SOLUTIONS TO REDUCING THE MARITIME TRANSPORT ASSOCIATED EMISSIONS

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Abstract: *The maritime transport is a vital component of the logistic and supply chain worldwide and a crucial sector for the EU economy. Although the maritime transport could be less pollutant than other transport means, the fuel oil dependency and the strong public community position for reducing not only the CO_2 emissions, but also other pollutants emissions (SOx, NOx, e.a.) are representing serious reasons for considering this industry as one of the most pollutant worldwide. This article is proposing an in depth view of the actual used technical and operational solutions which are available in the industry in order to reduce the emissions level onboard. Also there are presented the trends for increasing the energy efficiency onboard, by considering the cost – efficiency indicators and also the social and operational results inside the maritime transport companies.*
Keywords: *emission, reduction, solutions, technology, air pollution.*

IV. ELECTRICAL ENGINEERING SCIENCES

SECTION COMMITTEE:
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CONFERENCE ROOM: LI-P6

1. MONITORING SYSTEMS

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Abstract: *The proposed project target is to develop an integrated experimental system for monitoring moving or stationary, marine, land and air targets and displaying the information about these objects on an electronic chart[1]–[7]. The proposed system will improve the capabilities of the Romanian authorities to incidents and accidents at sea, performing search and rescue missions, and will help to prevent loss of life and to conserve marine flora and fauna in protected areas.*

2. DATA ANALYSES OF ONBOARD DISTRIBUTION NETWORK

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Abstract*: This paper presents a real-time software implementation for a vessel network supply data acquisition system. The software that are used is realized in LabVIEW and the hardware target is a NI-USB-6221 Data Acquisition System from National Instruments.*

3. AN OPTIMAL CONTROLLER DESIGN FOR AN AUTONOMOUS UNDERWATER VEHICLE MODEL

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Abstract: *This study designs a controller that are used in an AUV for depth and direction changing system. This design is based on the linearized model of the underwater vehicle.*

4. STUDY ON WORLDWIDE RENEWABLE ENERGY EXPLOITATION

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Abstract*: This paper presents in an original manner, gradually, the current market issues and factors that determine electricity use and large scale integration of renewable energy sources. We carried out a systematic bibliographical study on the current state of the global use of renewable energy sources and highlighted the main issues that define the wind as the main source of renewable energy in terms of investment and integration in the electricity.*
Keywords*:renewable energy sources, wind, solar*

5. EXPLOITATION OF RENEWABLE ENERGY SOURCES IN THE ROMANIAN ENERGY STRATEGY CONTEXT

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Abstract*: This paper conducts an analysis based on the current market situation of energy in the framework of liberalization and the need for providing energy security, in compliance with national and international standards for environmental protection. There are presented, by category, the types of renewable energy sources and their present situation in Romania. Also, are presented the particularities of renewable energy use in the low power electricity production and their integration in distribution networks.*
Keywords*: renewable energy, wind energy, solar energy*

6. ANALYSIS OF THE TERRESTRIAL MAGNETIC FIELD ANOMALIES GENERATED BY UNDERWATER OBJECTS, USING MAGNETOMETRY METHODS

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***Abstract*:** *Study of the terrestrial magnetic field is a topical issue in the context of understanding and interpretation of anomalies generated by materials with ferromagnetic properties. Analysis of the earth's magnetic field changes, using magnetometer methods, allows detection on the surface, of these types of materials. This paper presents some elements of magnetic field theory and the way in which magnetometer data obtained in the Romanian seaside have been interpreted.*
Keywords: *magnetometer, total terrestrial magnetic field, magnetometer*

7. THEORETICAL STUDY ON THE DEPENDENCE OF THE ELECTROMAGNETIC FIELD PENETRATION DEPTH IN SEAWATER, WITH THE SALTS CONCENTRATION

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Abstract: *Whereas the induced of an electrical machine is the element in which electromagnetic field energy is converted into useful mechanical energy, it becomes extremely important to analyze its properties. The issue of the liquid induced is not treated in all its aspects in the literature, therefore in this paper were highlighted aspects that the authors consider to be important for naval propulsion engines, having seawater as induced. Mechanical and electrical behavior of liquids depends very much on their*

nature, but also on many other factors, such as temperature, pressure, concentration of dissolved substances, etc. In the case of electrical machine with the solid induced (metal), electrical and mechanical properties of the induced remains almost unchanged as long as it is not replaced with another. For electrical machines with liquid induced, electrical and mechanical properties of the induced are dependent on many factors that may change during machine operation. The electrical conductivity, the most important parameter that determines the functioning of the electrical machine, depends strongly on the temperature and other factors. Whether for melted metals, conductivity depends only on temperature, in the case of an electrical machine which uses an electrolyte solution as induced, the whole phenomenology becomes more complex due to the strong dependence of the conductivity with temperature, and the concentration of dissolved substances.

Keywords: *penetration depth, induced, electrically conductive liquid*

8. AUTOMATING THE PROCESS OF TESTING THE FUNCTIONALITIES OF COMPLEX COMMUNICATIONS SYSTEMS

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Abstract: *One very important part in a product or systems' life cycle is the testing, or better said, how we do it and how we interpret the results. One has to test while developing a product in order to assure its reliability and conformity with the handed requirements. Once you acquire a product or system, you have to test it to be sure you got what you wanted and to determine exactly its limitations. Forward on, while exploiting a product, you will have to test it periodically to prevent loss of functionalities or diminishing performance of some characteristics.*

Testing specific products, especially when speaking about electronic devices, had become more automated. In these particular cases,

testing is much faster and more reliable. Complex communication systems are composed of a variety of products and, even if each one works perfectly independently, all kinds of problems may appear at system level. To avoid these difficulties we have to test the system and use the results in order to improve the system as a whole.

In the first part of this paper we present a series of testing procedures, with an accent on military communications systems, presenting the difficulties we have encountered. From those, we have selected some procedures that are suitable for an automated process conducted by an application for software assisted testing. .

As a necessary step in introducing the software assisted testing, we presented the software requirements for this application. The following steps will conclude by presenting the improvements of testing procedures with regard to rapid and objective tests' results.

***Keywords**: Informatics, Testing-and-evaluation, Communications.*

9. TESTING STATE OF THE ART RADIO COMMUNICATIONS EQUIPMENTS WITH REGARD TO THE LEGACY SYSTEMS USED IN TACTICAL ENVIRONMENT

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***Abstract:** The requirements for tactical communications systems have become, in recent years, more diverse and more demanding in terms of performance. Following this idea, a modern tactical communications system must be based on the IP technology for effortless integration with information systems, must provide sufficient bandwidth, in order to support a wide range of services, and must operate continuously even if the environmental and operational conditions become more and more unsuitable, things characteristic for the tactical environment.*

The solutions adopted by the armed forces worldwide in order to achieve fast and reliable communications include high capacity multiband radio stations and radio relay equipments. The integration with the legacy communications systems, mainly based on E1 and D1 Eurocom technologies, is a must, especially if the there is a strict budget to consider.
In this paper we present an analysis of several types of equipments and technologies used in the military tactical radio networks infrastructure along with different field test results. The analysis highlights the specific advantages and disadvantages of some equipments and it is based on test results obtained by communication equipments representative for current military market. The tests were performed under ideal conditions, in order to identify the maximum performances of the equipments and to establish a benchmark, and under tactical environment or real working conditions, in order to identify the weaknesses and the strengths of each equipment especially while operating integrated in a complex system.
Keywords: *Informatics, Electrical engineering, Communications, Testing-and-evaluation*

10. POWER CONTROL SCHEMES FOR DEVICE-TO-DEVICE COMMUNICATIONS IN 5G MOBILE NETWORK

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Abstract: *Device-to-device (D2D) communications integrated into cellular networks is a means to take advantage of the proximity of devices and thereby to increase the user bitrates and system capacity. D2D communications has recently been proposed for the 3GPP Long Term Evolution (LTE) system as a method to increase the spectrum- and energy-efficiency. Device-to-device (D2D) communication has the potential of increasing the system capacity, energy efficiency and achievable peak rates while reducing the end-to-end latency. To realize these gains, are proposed resource allocation (RA) and power control (PC) approaches that show near optimal performance in terms of spectral or energy efficiency.*

11. CONSIDERATIONS ON DIFFERENTIAL CRYPTANALYSIS ATTACKS ON LIGHTWEIGHT BLOCK CIPHERS

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Abstract: *The most part of symmetric block iterative algorithms are designed to be resistant to cryptanalytic attacks by using nonlinear elements, usually substitution boxes (S-box). Recently, new families of symmetric block iterative algorithms (e.g. lightweight block ciphers) were designed. These new classes are not using substitution boxes, but they have an increased number of rounds. The authors considered useful to compare the resistance of these two subclasses of block ciphers against differential cryptanalysis attack, having in mind that this attack, along with linear cryptanalysis attack, is one of the most important cryptanalytic attack used in evaluation of symmetric block encryption algorithms.*
Keywords: *AES, lightweight block cipher, differential cryptanalysis.*

12. A CASE STUDY ON THE ELECTRONIC CHARTING FOR ROMANIAN SECTOR OF THE DANUBE RIVER

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Abstract: *Navigation on rivers must take place in a safe and economic efficient approach. Navigation chart is an indispensable to all for the sailors. Current ships are equipped with navigation instruments that uses digital electronic charts.*

This paper presents a case study that refers to a complex activity that took place in the beginning of year 2000; in order generate an electronic navigation chart for the Romanian sector of the Danube river.
The experiment was initiated by the University of Stuttgart –Germany together with Romanian partners: Ministry of Transportation and Petroleum-Gas University of Ploiesti.
The specific activities of this project were held in Germany and Romania by a research group which included specialists from each partner.
For data collection was used a device developed in the project and installed on a ship belonging to the Administration Of The Lower River Danube Galati - Romania. The digital chart obtained in the experiment was tested with the same ship.
***Keywords**: navigation line, electronic chart; GPS location*

13. A HIERARCHICAL APPROACH TO AUTOMATION FUNCTIONS

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***Abstract:** Process control can be done either automatically or manually in order to achieve the objectives of quality, efficiency and security. The automatic approach consists in totally or partially implementing the monitoring, control, safety and optimization functions.*
This paper presents a hierarchical approach to the four fundamental functions of process automation along with formalization elements of two-level hierarchical systems. Hierarchical organization along with distributed approach on one or more levels increases the ability for data processing in real-time and creates the premises of advanced automatic control implementation. The hierarchical approach to the control of a vessel on a navigable river is presented as a case study.
***Keywords:** process objectives, process automation functions, hierarchical and distributed systems, real time, vessel's input and output variables.*

14. ON THE DESIGN OF A MONITORING AND ALARMING SYSTEM FOR HAZARDOUS GOODS TRANSPORTATION BY SHIPS

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Abstract: *Various hazardous goods and materials are now transported all over the world in ships and vessels. In order to minimize the high risks posed to the people and environment, the recipients containing flammable substances, toxic or nuclear wastes should be tracked and monitored in every transport phase: loading on the ship, storage during the haulage on the sea and unloading at destination. An innovative system that is able to respond to these requests is presented in this paper. The proposed solution core is an innovative RFID tag with a special memory structure. The system integrates automated location devices (GPS / Glonass), data recorders, specially created intelligent RFID readers and a central monitoring station that is able to communicate with governmental authorities (emergency services, environment protection organizations) in order to alert in case of dangerous and emergency situations.*
Keywords: *hazardous substances tracking, RFID, transportation safety, monitoring ship load*

15. SECURITY OF INDUSTRIAL CONTROL SYSTEMS – AN EMERGING ISSUE IN ROMANIA NATIONAL DEFENSE

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Abstract: *Romania, a NATO country since 2004, is situated at the Eastern NATO borders, having a geostrategic position at Black Sea and near Ukraine, a very sensitive area due to its vicinity and influence of Russia. Romanian energy production and distribution systems along with industrial plants are critical infrastructures for the country energetic independence, an important factor of national defense. Each power plant, petrochemical facility or refinery is operated by various interconnected control systems. In this paper the author tries to address the critical industrial control system protection against cyber-threats (cyberterrorism, cyberwar, hackers, etc.). The state of the art in identifying vulnerabilities and securing control systems is presented in the first part of the paper. Based on the analysis of the identified vulnerabilities the author tries to provide a comprehensive*

guideline for increasing the security of those critical infrastructures without affecting their performances and functionality.
Keywords: *control systems security, cyber-threats, cybersecurity*

16. TRENDS TO INCREASE THE QUALITY OF ELECTRICITY ON BOARD

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Abstract*: The quality indicators of electricity must meet the next conditions: universality with the purpose of using them in exploitation and for realization of a control methodology using simple and cheap measuring means and with the needed precision; perfectibility, precisely defined and few for characterization of distinctive properties of energy in stable conditions of the naval electro-energetic system functionality.*

The deviation of voltage and frequency, the voltage asymmetry and deviation from the sinusoidal form are the main indicators of quality of electricity with a practical importance. In the S.E.N., when permanent conditions is set, the sign of voltage deviations is the same for all electrical parts and can be different from the voltage sign. Voltage and frequency deviation depending on the nominal value can be positive or negative. Frequency and voltage decrease on electrical appliances electrical terminals leads to rotation moment decrease and for a constant load, the current value increases. The frequency decrease rises the currents value towards the consumer on account of increasing the magnetization current of transformers and inductive reactance decreases in circuits. The maxim allowed limits of voltage deviation are+/– 10% for permanent conditions and +/– 20% for 1,5 seconds or+/– 30% for 5 seconds for short period conditions.

Voltage asymmetry of ships appears in three-phasic systems because of connecting mono-phasic consumers and lead to occurrence in S.E.N. to consumers of harmonic components with frequencies of over 50Hz, components that increase power losses and lead to heating the generators, engines and cables.

The deviation from the sinusoidal form is generated by generators (up to 20%) or by consumers (up to 5%). When naval generator terminals are connected to nonlinear resistances, the consumed current has an asinusoidal form, and voltage drops of the superior harmonics of the current changes for tension curve in S.E.N.. Energy static converters represent the main nonlinear load of a naval electrical network. Under the rules of international maritime registers, the deviation from the sinusoidal form mustn't exceed 5% out of the peak value.

The changing in form of the voltage curve in S.E.N. happens because of energy static converters depends on: the nature of the load; parameters of energetic sources on ships; adjustment depth; the ratio between the sources power onboard and the static converters used. As advert effects we find generator and appliances heating, precise reduction of automatic adjustment systems and command of generators.

***Keywords:**, electro-energetic system , voltage, frequency*

17. OPTIMIZATION OF MARINE POWER SYSTEMS

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***Abstract:** Automated integrated systems assures supervision and command of a machine, of navigation integrated systems and loading, unloading and observation of the load. Automated systems for machines and mechanisms are used for signalization and indication, for controlling the propulsion installations, for distribution and energy command depending of the role on ship (essential and nonessential), etc. The running of electric sources needs the use of automated voltage regulation, automated synchronized schemes and distribution of load. Automated systems for navigation are used for autopilots, for supervising of hull stress, for active roll stabilizers, for anti-collision system and route, etc. Specific for naval integrated automation systems is the use of two computers – one for operation and one for standby – the two of them operating in tandem. Given the optimum level of optimization of a ship, it depends on many factors, from which the most important are the ones related to economic efficiency. Safety and reliability increase in installation operating, aggregates and measuring and control*

equipment, real time processing of large volumes of information required making programs.

In order to achieve an optimization of electrical systems and energy consumption onboard a ship we made a program with the help of: Microsoft Visual Studio C# 2010 Express Edition for the assembly of data; MathCAD for numerical calculation and Microsoft Excell collect experimental data and plotting graphs representing some practical results.
Keywords: *optimization, automated systems, integrated systems*

V. MANAGEMENT AND ECONOMICAL SCIENCES

SECTION COMMITTEE:
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CONFERENCE ROOM: CP-06

1. WAYS TO OPTIMIZE SERVICES MARKETING DECISIONS

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Abstract: *The present paper take into consideration the development of decision support systems in marketing and highlight the main areas in which marketing decisions can be optimized. In a turbulent marketing environment as it is today, optimizing decisions represents the main task of any management level. Nowadays organizations can build effective marketing strategies only if they possess the tools and knowledge to plan and implement decision support systems. In the field of services marketing the dynamics of marketing environment, along with the greater involvement from the customer point of view determine a stronger relationship between performance and the decisions optimization process. Thus, it becomes imperative for services providers to anticipate and implement an optimal flow of decisions in order to maximize their answer to the environment change.*
Keywords*: marketing models, decision support systems, marketing strategy, strategic planning*

2. MARITIME SECTOR DEVELOPMENTS IN THE CONTEXT OF ECONOMIC GROWTH - MARITIME TRADE EVOLUTION

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Abstract: *The paper presents an overall image of all familiar processes related to the relationship between economic growth-maritime trade-maritime markets-world fleet output. The analyses are being converted from world economic analyses to those related to shipping capacities and their usage at microeconomic level. The main conclusions stand for an urge to issue some valuable judgements which may allow the development of sensible managerial strategies as a solution to accomplish economic competitiveness.*
Keywords*: maritime markets, economic growth, maritime trade, operational output, over tonnage.*

3. THE RELATIONSHIP BETWEEN TECHNICAL AND ECONOMIC VARIABLES IN MARITIME TRANSPORT

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Abstract: *The current paper deals with the relationship between a vessel optimal speed and its profit in maritime transport, based on a model. The two variables are determined in turn by a series of other influential factors which are being presented in a systemic framework. The study of this relationship is especially important in terms of the planning of a vessel's voyage, which allows to assess the profits based on the evolutions of the respective freight and costs on different transport routes.*
Keywords*: freight, Charter Party contract; bill of lading; bunkering; running cost*

4. THE RELATIONSHIP BETWEEN PORT LOGISTICS AND GLOBAL LOGISTICS PERFORMANCE

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Abstract: *This paper presents the current state of development of the logistics sector in Romania, through a system of reference and reporting generally accepted in the international and regional economy. The key standard of the logistic performance used in the analysis conducted in this paper highlights the place and role of our country in the international supply chain. The authors identify and argue the relationship between shipping, port logistics and the final cost of the products.*
Keywords*: logistics performance, port logistics, naval transport.*

5. SIMEN - INNOVATIVE SOLUTION FOR MONITORING EXHAUST EMISSIONS FROM SHIPS

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Abstract: *The environmental protection is a critical issue for the global maritime industry. Maritime transport contributes significantly to air pollution, especially in coastal areas. Over 70% of emissions from ships, especially greenhouse gases are produced in the coastal zone at a distance*

of about 400 km from the coast. Air pollution from ships has been at the center stage of discussion by the world shipping community at least during the last decade. The purpose of this paper is to develop an innovative solution for monitoring gas emissions from ships, a software solution for monitoring data on emissions from shipping in the Western Black Sea.
Keywords: *ships, emissions, monitoring, Black Sea*

6. PLANNING AND ORGANIZATION OF PRODUCTION IN THE SHIPYARDS

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Abstract: *Despite the situation of overproduction and low cost transport new ship orders worldwide bloom for the first time after a long period of decline, driven by an efficient design and low prices on new construction. Owners invest in ships with new design energy efficient to reduce transport costs and to increase revenue. Accordingly, planning and organization of production in the shipyards plays a strategic role in the further development on this market. In this paper the authors will present complex production process in a shipyard and the main problems they face.*
Key-words: *production, shipyard, planning*

7. STANDARDIZATION IN TRAINING AND QUALIFICATION OF THE LABOR FORCE IN SHIPPING

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Abstract: *Shipping is an industry governed internationally by imposing regulations that must take into account by any company involved in maritime transport. In a market where companies operate all around the world, each respecting the rules imposed at national level, standardization is an activity that comes and establishes common rules and helps the interaction between firms. The most important regulations are imposed on*

the labor market in shipping. In this paper the authors aim to highlight the importance of standardization in training and qualification of the seafarers in shipping by presenting the factors that lead to the improvement and functioning of these market regulations.
Keywords: *seafarer, shipping, standardization*

8. INTERNATIONAL STRATEGIES IN THE GLOBAL GOVERNANCE OF LIQUIDITY CENTRIC CRISIS

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Abstract: *Earlier evolution within the global international financial system crisis, depicted mainly by the functional crisis provocative effects, had recalled for the rethinking of market functionality, in order to reveal, prior to any other kind of strategy, the international institutional weaknesses in the financial system supervision on a global scale. The contemporary imbalanced developments, correlated with a still differentiated monetary and financial political framework, had transformed, progressively, the perceptions of real estate's values toward those levels forced by creditors. Before the last crisis dawn, many financial institutions, determined by a strong competition in the credit sector, had left away the prudential attitudes and had borrowed money from different investors, guarantying the long terms transactions, with short time securities from speculative markets, on setting and fuelling a market bubble. Today, the trend is reversed one, the banking system behaving too prudential and blocking a flexible access of the economic entities to the finances in order to support the economic recovering. In this order, the paperwork is meant to recall for redesigning the risks models, considering not only but the cause-effect diagrams, but also the consistent global vocation of it.*
Keywords*: international institutional management, global governance, financial - monetary system, financial crisis*

9. THE INTERNATIONAL HUMAN CAPITAL AND THE GLOBAL COMPETITIVENESS

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Abstract**:** *The globalization of human capital is one of the most noteworthy dimensions of the current wave of globalization. Globalization, technological evolution, and the ambition to become a knowledge-based economy has encouraged many countries to pursue new ways to maintain a competitive advantage which in turn has given focus on the need to develop its human capital (HC). At the organizational level, Globalization has changed the way in which organizations (private or public) operate. HC is of vital importance for any success, and increases through education and experience of its employees. It is therefore at this point that the human capital and international human resource management (IHRM) intersect. IHRM's link with HC makes it probably one of the most critical functions of any organization because it deals with people related issues, particularly when the organization is operating within a highly competitive global environment. Therefore, the purpose of this paper is to examine particularities in regards to Human Capital within a globalization framework.*
Keywords*: human resources, human capital, globalization, expats profile, new economy*

10. ECONOMIC PERFORMANCE ANALYSIS OF EUROPEAN SOCIAL MODELS

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Abstract: *The European economy faces many problems in the management of micro and macroeconomic aggregates. Over time, in Europe, have arose many European economic models that attempted to explain the efficient functioning of an economic mechanism. Most often many of these models have failed, but it seems that there is still one social welfare model desired by all economic agents operating throughout Europe.*

The hypothesis of the research assumes that the Scandinavian model is efficient, while Anglo-Saxon model, Continental and Mediterranean are inefficient. The purpose of this study is to highlight the efficient organization of Scandinavian model in relation to the other three. A high employment rate and productivity levels well above the European average places Scandinavia as the best economic model. The results are extracted from the application of statistical descriptive methods and correlation analysis.
Keywords: *labor productivity, employment rate, economic performance, Pearson correlation coefficient.*

11. THE EUROPEAN SOCIAL MODELS IN TIMES OF ECONOMIC CRISIS

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Abstract: *European social models that emerged in Europe are answers to various problems faced by micro and macroeconomic activity. The austerity measures adopted by some of these models have led, in most cases, to a deepening of the economic recession. European social models which had an innovative investment plan, mainly Scandinavian model, managed to pass easily from the critical moments, increasing prosperity and living standards. This paper provides an overview of how the European social models have attempted to revive their economies. The main hypothesis of the paper assumes that investments in education and workforce improvement led to the growth of the living standards in the Scandinavian model.*
Keywords: *european social models, economic crisis, austerity,recession.*

VI. SCIENCES (HUMANITIES, MATHEMATICS, INFORMATICS, FOREIGN LAGUAGES AND OTHERS)

SECTION COMMITTEE:
Associate professor Delia LUNGU
Associate professor Alina BALAGIU
Associate professor Camelia CIOBANU

CONFERENCE ROOM: C-AM1, C-AM2

1. PIECES OF EVIDENCE FOR THE CONSUMPTION OF ALCOHOLIC BEVERAGES

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Abstract: *As the labor law regulations do not provide specific rules regarding the field and the methods of collecting evidence, the civil law is applicable. The paper reads the methods to address when voluntary alcohol poisoning issue must be solved. It highlights the conditions of admissibility of evidence, the clinical manifestations associated with the consumption of alcohol, the preliminary investigation under labor law, and the legal measures which the employer is entitled to take in such situations*
Keywords: *alcohol consumption, labor law, evidence gathering*

2. A SEA OF WORDS

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Abstract: *English is an extraordinary language, very rich in metaphors, and the intention of this paper is to show that many of the figures of speech that we use daily derive from the language and customs of the sea. There are very many ordinary, everyday expressions as, for example "to rummage", "to cross the line" and others, which were in fact born at sea as part of the*

jargon that English-speaking seamen have used for ages. The nautical field is a very rich source of inspiration; therefore the nautical terms constitute an important heritage that has been passed down to us by entire generations of seafarers. Language has always been of great interest and concern to people, and especially to seamen who enriched their language with idioms and metaphors that, over the centuries, have been passed on from ship to shore.

Key words: *sea jargon, metaphor, idiom, nautical term, seafarer.*

3. TO GIVE AN ORAL PRESENTATION OR TO RUN THE GAUNTLET

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[2]Lecturer, PhD, Maritime University Constanta

Abstract: *Seminars, practical courses, projects, oral exams- all need preparation and the skill of speaking in front of many people. Glossophobia- the fear of speaking in public, is a condition that should be overcame by the students as quickly as possible. Taking apart the psychological factor, there are some points to take into consideration if one intends to deliver a good oral presentation.*

Keywords*: Speaking, plan,practise, presentation.*

4. WORDS OF THE SEA TAKEN TO THE LAND

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Abstract: *As teachers of ESP- maritime English, we deal with students who are adults having some acquintance with English, and have to rely on their previous knowledge in order to aquire elements of vocabulary that is to build their communictive skills as professionals in the business.Our approach concentrates on teaching language in context. Being able to recognize and use elements of maritime English in their field increases our students' motivation.*

Keywords: *Maritime, Nautical idioms,sea, ship, etymology.*

5. ETHICAL PERSPECTIVES IN THE ANALYSIS OF PERSUASION

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Abstract: *The work that we propose is an analysis of the phenomenon of persuasion in order to determine the moral responsibilities of persons involved in an action of persuasion. As a form of human behavior, persuasion always contain potential moral problems as requires conscious choices about the proposed objectives and the means used to achieve them rhetorical and implies necessarily a potential judge that can be persuasive agent, receiver or an independent observer. The moral value of a persuasive instance is estimated differently by persuasive agent and persuade recipient, depending on the ethical standards they use. In this respect, the present study aims to bring some clarification on: the origin of ethical responsibility of the person who persuades, and the one that is persuasive; moral obligations incumbent upon the person who persuades, and the persuasive; ways to support appropriate ethical standards of persuasion.*
Keywords: *ethical standards, persuasion, persuasive instance*.

6. THE ROLE OF PRACTICE AND SELF-TESTS IN THE ECONOMY OF MARITIME ENGLISH COURSES

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Abstract: *First, there will be a discussion on the need for Maritime English (ME) in the shipping industry, decided by the international maritime decision-making bodies, as a result of globalization leading to the proliferation of multinational crews on board ships claiming a commonly accepted language for on board and external communications. Then, the need for MET (Maritime Education and Training) Institutions to design meaningful courses to meet the STCW'95/10 and IMO 3.17 Course Module requirements will be emphasised. A literature review on testing will be overviewed followed by the presentation of some samples of practice and*

self-tests included in deck cadets' courses with the purpose of consolidating their ESP (English for Special Purposes) knowledge. The conclusions will include some of the students' opinions on the above mentioned tests as an efficient means of preparing for the end of term final test.
***Keywords**: Maritime English, self-test, practice-test*

7. E-LEARNING MARITIME ENGLISH COURSE-FINAL RESULTS AFTER PILOTING STAGE

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***Abstract**: The shipping industry has become more and more demanding as far as the General and Maritime English are concerned. This is due to the fact that most merchant ships are owned by foreign companies and manned by multinational crews who need to be competent to communicate in English orally and in writing. In this respect, the IMO (International Maritime Organization) and the STCW'95 (Standards of Training Certification and Watch-keeping) convention and code imposed a number of requirements regarding the seafarers' Maritime English knowledge and adequate use. As a result of the international maritime bodies' requirements, the SMCP (Standard Marine Communication Phrases) has become mandatory for the shipping industry worldwide. The SMCP is a comprehensive standardized safety language, precise, concise, simple and unambiguous so as to avoid confusion and error. It consists of a set of terms, definitions, phrases used on board ships, for ship-to-ship and ship-to-shore communication. Therefore, the MET (Maritime Education and Training) teachers have to meet the challenge of designing attractive and efficient courses to motivate their students. It seems that on-line courses are becoming more and more popular with the 21st century students. Last year we piloted the first year deck cadet on-line course. We will present in this paper the final results and considerations after analyzing the students' feed-back commentaries and suggestions. In a learner-centered type of education, the students' involvement in teaching/learning materials development as well as in course design is a must. In this way, the learners become more responsible for the act of learning, more enthusiastic and more determined to achieve success.*
***Keywords:** Maritime English; feed-back; data base expansion; authentic materials*

8. "CONTENT AND LANGUAGE INTEGRATED LEARNING" OR "ENGLISH FOR SPECIAL PURPOSES"

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***Abstract**: Taking into consideration the definitions and implications of the 'content and language integrated learning' and 'English for specific purposes' we will try to identify the affiliation of the Foreign language classes, especially English, taught in Academies, to these methodologies. The characteristics of the methodology that fit better to the type of classes we teach will be of the greatest importance.*
***Keywords**: CLIL, ESP, methodology*

9.CHARACTERISTICS OF MARINE ELECTRICAL ENGINEERING TERMINOLOGY

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***Abstract**: The marine electrical engineering terminology, as part of the engineering terminology, shares the characteristics of the main scientific field. In this paper we will try to depict some individual lexical traits of the electrical terminology applied to the maritime environment, more precise the electrical and electronic equipment used on boardships.*
***Keywords**: marine electrical engineering, terminology, ships.*

10. WEB RESOURCES FOR MARITIME ENGLISH

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Abstract: *This paper aims at assisting both teachers and students of Maritime English in their endeavor to study and acquire knowledge related to this field. Our goal is to guide students to sites on the web that will help those complete homework or research assignments or help their home skills in specific topic areas. We have also provided a brief description of each and every site after having performed a thorough checkup of their relevance and reliability as far as the information contained is concerned. Without having the pretense of having forwarded an exhaustive and comprehensive list of maritime English sites, we dare hope that this paper will come in handy to all those interested by facts and information related to maritime English.*

11. LA LITTÉRATURE D'ENFANCE DANS LA FORMATION INITIALE DES ENSEIGNANTS. ÉTUDE DE CAS

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Résumé : *Nos considérations ont eu comme point de départ la prémisse que le métier d'instituteur est plus difficile que les autres métiers du système éducatif, vu que les immenses disponibilités intellectuelles et affectives des enfants du premier degré (maternelle et cycle élémentaire) ne peuvent être mises en valeur que par une bonne connaissance des mécanismes psycho-intellectuels et biologiques de l'être humain lors de cette étape, celle des grandes découvertes, d'un extraordinaire acquis.*

Celui qui dispense un cours de littérature d'enfance n'est pas un professeur quelconque, tout comme le professeur de littérature ou tout autre professeur ne doit pas être un fonctionnaire quelconque. Il est « un formateur de formateurs », influençant directement la formation de nombreuses générations, ce qui impose, d'une part, une bonne connaissance des mécanismes de « la réalité seconde » que recèlent l'œuvre littéraire et, d'autre part, une bonne connaissance de l'univers de l'enfance.

Mots-clé : *Littérature d'enfance, formation universitaire, interdisciplinarité, curriculum.*

12. L'INTERDISCIPLINARITE DANS LES UNIVERSITES NON PHILOLOGIQUES. ETUDE DE CAS : L'ACADEMIE D'ETUDES ECONOMIQUES DE BUCAREST

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Résumé : *L'interdisciplinarité est de nos jours un élément important dans la recherche et l'enseignement supérieur. Au niveau des priorités institutionnelles des curricula, des compétences à former chez les étudiants etc., l'interdisciplinarité doit être soutenue par une pratique pédagogique adaptée. Dans cet article nous nous proposons d'analyser les démarches que les universités roumaines non philologiques adoptent afin de consolider leur pluridisciplinarité. Nous nous penchons notamment sur l'enseignement/apprentissage des langues étrangères sur objectifs spécifiques et des composantes de la dimension interculturelle liée à un certain domaine. Nous examinons les pratiques actuelles et nous proposons des voies alternatives, y compris dans la direction de « l'enseignement par sujet » du modèle finnois.*
Mots-clé : *Interdisciplinarité, langues étrangères sur objectifs spécifiques, communication interculturelle, didactique des langues-cultures.*

13. PARAMETER OPTIMIZATION OF PSO FOR PROTEIN STRUCTURE PREDICTION PROBLEM IN THE 2D HP MODEL

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Abstract: *Proteins are considered the most important molecules found in living cells because they are fundamental to many of the life processes. In order to accomplish their tasks, proteins fold in their native state, which is the three-dimensional arrangement of their atoms in which the protein*

reaches its minimum energy. The protein structure prediction (PSP) problem consists in finding the native state of a protein starting from its atoms. The HP model (Hydrophobic-Polar) is one of the simplified folding models that have been used for this problem. Despite its simplicity it captures well enough the interactions of atoms within the molecule. However, the protein folding problem in the HP model is NP-hard both In 2D, and 3D. In previous papers we have applied Particle Swarm Optimization (PSO) to the PSP problem with good results compared to other meta-heuristic methods. In this paper we seek to optimize the parameters of PSO to improve its results for this problem.
Keywords: *protein structure prediction, particle swarm optimization, genetic algorithms, HP model*

14. OPTIMIZATION OF ITEM-BASED RECOMMENDERS WITH EVOLUTIONARY ALGORITHMS

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Abstract: *Recommenders are computer software used to provide suggestions to users about potential items that might be of interest to them, based on user history, user preferences and items similarity. From the application point of view, such systems are a major component of any modern ecommerce solution because they can dramatically increase the revenue of the business. From the software point of view, a recommender is a complex software which integrates many subsystems that implement advanced algorithms from fields like data mining, machine learning, databases and more. Because of this complexity, recommenders typically have a high number of structural and control parameters, which makes tuning them very challenging, but none the less very important, because minor performance increases could result in important user interactions. This paper present an optimization method for item-based recommenders using evolutionary algorithms to tune the parameters of the system.*

15. 1550 YEARS SINCE THE FIRST JOURNEY AROUND THE WORLD WAS COMPLETED BY AETHICUS DONARES (ISTER)

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Abstract: *Aethicus Donares (Ister), philosopher, geographer, explorer, the first European who discovered America, the first human being who travelled around the world, would have lived during 25th January 421-500 A.D. He was born in Histria and initially embraced the military career, working for a period in the county of Scythia Minor, at Durostor. As a result of his military skills, he took part in the battle on Catalauns Fields in 451 A.D. against the Huns.*

In the maritime city-citadel Histria, he perfected the techniques of travelling becoming a good sailer. Aethicus Donares left this place on 21st March 461 when the day time equals night. He was in charge of the ships and together with his 101 companions, he had a leading role in advancing the ships. His travel took place between 461 and 465, about 5 years on dozens of seas, bays, straits and four oceans-Atlantic, Frozen North, Pacific and Indian.

He wrote "Cosmography" in 466 A.D. This famous work was issued in more than 40 copies. It was written in the Dacian language and it included several volumes. Being a genuine encyclopedia, "Cosmography", is also translated in Greek and Latin. The Public Library of the Leipzig University in Germany has a manuscript belonging to the 8th century which is written in Latin.
Key words*: geographer, Cosmography, expedition, sailing, ships.*

16. ROMANIAN CULTURAL CENTRES FROM EUROPE

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Abstract: *The Romanian Spiritual Values have always been into Europeans' public eye because of the documentary researches. In the same time the Romanian Cultural World would have liked to be recognized in Europe bringing its contribution to achieving some cultural centers in the period between wars. It is the period when Romania expressed itself strongly from the political and civilization point of view establishing its stability role in the South-East of Europe. The intellectuals consider that Romania should be recognized from the cultural point of view in order to support the information changes and European harmony. In 1911, an initiative is taken*

to open a Culture Institute at Bucharest dedicated to the south-east european issues. Those who took the initiative were Nicolae Iorga, Vasile Pârvan and G. Murgoci, in 1914 and their goal was to study this part of Europe taking into account the old traditions and Romanian present interests. The Romanian Researchers have considered an important connection to Italy because of both countries' latin root. The first attempt of establishing such institution took place in 1914, but because of the war, the idea was abandoned. There were new attempts in 1917and 1918. In 1920, Nicolae Iorga, as a deputy, proposed a law to found Romanian Superior Schools: one of Archeological Studies and the other of History and Filology and Belle Arte at Rome and Paris. Nicolae Iorga had a great role in the scientifique activity of the Romanian School from Paris, the Institute from Albany from Saranda, Casa Romena from Venice.

Keywords: *institute: Paris, Rome, Paris,Venice, Saranda*

17. EXAMPLES OF URBAN DEVELOPMENT BETWEEN 1850 -1914 IN WESTERN AND EASTERN EUROPE

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Abstract: *Europe was and is a conglomerate of nations, ethnicities, beliefs and cultural models that many elements separate but there are things that unite them, as well. Political capitals of Europe after 1850 adopted urban plans for developing the structure of cities in economy, culture and especially for utility and functionality. Bucharest was no exception but the result shows that plans were left to the phase of goodwill which was not the case for large cities such as Paris or London. In all cases it will be observed during the study that there were several common defining lines such as the permanent demographic and territorial expansion, absorbing suburbs into neighborhoods, industrial development, the emergence of new shopping centers, increasing the importance of products, houses, people , the external influences and cultivating the taste for beauty classified as utility.*

Keywords*: planning, design, cities, demography, constructions, centre, suburb*

18. APPLYING QR CODES, NFC TAGS OR BLE BEACONSON OBJECTS FROM A UNIVERSITY

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Abstract: *In this article I try to present some of Internet of Things solutions that can be applied to various problems in a university environment and beyond. Generally, the campuses are large areas with many buildings in that the identification of a specific location can be a difficult process for both existing students and especially for those new entrant or visitors. One of the most disturbing things for the teacher during the course is when students' mobile phones emit different sounds from call to the notification of SMS, or Facebook, WhatsApp, Viber and others messages. Such problems, and many others, can be solvedby using of QR codes, NFC tags or BLE beacons.*
Keywords: *Internet of Things, QR, NFC, beacon, communication, university, smart environment*

19. TRANSMISSION AND STORAGE OF DATA FROM A SMART ENVIRONMENT, IN THE CONTEXT OF INTERNET OF THINGS

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Abstract: *In recent years, Internet of Things (IoT) concept won more space and more people from different domains of activities. The easiest way to get into this fascinating world of smart objects is to try to capture and transmit data using a sensor connected to a platform dedicated to this purpose. In this article I will show how we can measure the temperature and air humidity in a room and where we can store this data.*
Keywords: *Internet of Things, microcontroller, Arduino, communication, cloud, PHP, MySQL*

20. SOLVING CONCRETE PROBLEMS IN NAVAL FRAMEWORK THROUGH CANONICAL MATHEMATICAL MODELS

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Camelia CIOBANU [2]
Irina CRISTEA [3]
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[2]PhD, "Mircea cel Batran" Naval Academy, Constanta
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Abstract: *The paper aims is to point out how good results in the management of shipping might be achieved through canonical mathematical models.*
Key-words: *mathematical model, North-west corner method, minimum element method, mixed differences method.*

21. SOLVING PRACTICAL PROBLEMS IN SHIPPING BY USING MATHEMATICAL MODELS

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Abstract: *The purpose of this paper is to highlight how using mathematical algorithms, some practical problems on board can be more easily solved.*
Keywords: *mathematical model, Yu Chen algorithm, Bellman algorithm.*

22. BYOD IN LARGE ORGANIZATIONS

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Abstract: *The Bring your own Device concept started to be increasingly adopted by companies and institutions as they try to provide extended mobility to their employees or students without decreasing their quality of work. One of the other significant advantages that this concept introduces is the cost saving part in respect to device purchasing, management and maintenance. Furthermore, because employees are more familiar with their own device the number of support calls should decrease and, with employee awareness programs, patching and updates will fall under their responsibility.*

Driven also by the growth of the number of mobile platforms available BYOD has the intent to provide customers and students ease of access to the organization's applications. Accessing information in real time irrespective of the location or time offers the potential to increase productivity. Having your entire workplace accessible through a thin client (app) on your phone or tablet would give you the opportunity to deliver your work using only an internet connection.
In the same time BYOD introduces a series of concerns as now the perimeter of the network, becoming so volatile, would be harder to secure. Having personal devices accessing the internal assets of the organization from anywhere leaves doors open to unauthorized access, malware attacks or information leakage.
In the end in order for organizations to adopt and implement BYOD, there has to be a compelling business case to support it and the rewards must outweigh the risks.

23. CONSTANȚA'S HARBOUR LIFE AT THE TURN OF THE TWENTIETH CENTURY

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Abstract: *The harbour and sea life were inextricably linked components of Constanța in modern times, which is why the history of the town would be incomplete without these issues. The harbour with its animation, with its mixing, with the swarm of back and forth, was the most dynamic city area and would enter numbness, like the city itself, only on very cold winter days. If the harbour's activity was affected due to political and military events or diplomatic conflicts, the whole city life suffered; if its activity was up, everyone had reason to rejoice.*
The harbour''s city dwellers were related to the Levant with the help of the Eastern Line RMS vessels, with Central and Western Europe as well as America, using the Western lines and also other foreign, shipping agencies; finally with Russia, especially using military ones, and the Bulgarian neighbours.
Key Words*: harbour, ships, economy, festivities, travels*

24. IDENTIFYINGWITH PARENTS FOR DETERMINATION PROSOCIAL AND AGGRESSIVE BEHAVIOR IN CHILDREN

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Abstract: *Family and parents as a social and educational – training factor for pro-social and aggressive behavior in the child. Social - psychological climate in the family; Personal appearance of the parent. Parent as a model for aggression and non-aggression pact, a set of personal parental qualities; Pedagogical culture of parents - the child as a value and as a subject in the family, parents in the upbringing and socialization of the child's personality (parental responsibility), correctional and educational purposes in the family of children, typical educational resources in the family, creating conditions for prevention. Child digested patterns of behavior of the loved ones of those who live with and grow from those who learn and intentionally or unintentionally gave him a role model. This role model is "recorded" and is multiplied generation after generation. Then talk about traditional folk psychology, seek the roots of one or other behavior back in time or in primary human development, name lyin his childhood.*
Key words: *family, identity, pro-social, aggressive behavior.*

25. EDUCATIONAL – PEDAGOGICAL WORK INTERACTION WITH CHILDREN WITH OPPOSITIONAL DEFIANT BEHAVIOR

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Abstract: *In modern social conditions one of the most common concomitant problems seen in the deviant behavior is oppositional defiant behavior, aggression and aggressive actions of people. To a large extent the problem of challenging events associated with the specifics of human life, with systems of relations in which the person involved, as well as the situations in which it is present.*

The relations parents-children can be based on the mutual love, sincerity, kind-heartedness and understanding, and also on the rudeness, neglecting, antipathy, lack of understanding, scandals and other negative behavior towards the child. These are two diametric opposite type relations.

They by radical different way characterized the upbringing-educational environment within the family and create different base for formation and development of the child's character.

The inharmonious relations between the adults and the children in the family leaved strong traces on the children mentality. For the children from very young age any trouble, anxiety, and pain create strong traces in the children soul. These negative conditions reflect on the character and the understanding and on the entire shaping of the personality as well.

***Key words**: family, child, aggression, behavioral model, oppositional defiant behavior*

26. LEVERAGING FPGAS AND SDNS FOR HIGH SPEED IPC IN HIGH PERFORMANCE COMPUTING CLUSTERS

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***Abstract:** Many modern computing clusters have FPGA accelerators installed in their nodes. Apart from their specific purpose, these cards could also be configured to communicate with the outside world by a network interface, given that one exists. The communication structure of the cluster is, in most of the cases, a network to which nodes are connected. The migration toward the support of Software Defined Networks in switch fabric, which is already visible in several large manufacturers, gives the opportunity to dynamically create isolated networks between applications running on nodes inside the cluster. When parallel application are started on distinct physical nodes, inter process communication, with all the implications, requires special attention from system administrators and programmers. This paper explores the possibility of having an automated and transparent IPC method that is based on mapped memory, dynamically synchronized across several processes that are bound to the same SDN.*

27. THE IMPACT OF OUTDOOR PLAY ACTIVITIES IN SCHOOL CHILDREN

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Virgil ENE-VOICULESCU[2]
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Abstract: *The present study explored how a natural environment in Norway provides a stimulating plays cape for kindergarten children, and how different features in the landscape an afforded plays activities. The impact of such outdoor activities on children's motor fitness was tested, and a better improvement was found in the experimental group compared to the reference group. The study indicated a probable relation between all-round play in the natural environment and the effect on motor development in the children.*
Keywords: *children and environment, landscape as plays cape, play habitats for children, affordances for play, motor development*

28. PROFESSIONAL RECONVERSION - STUDY AND PERSPECTIVES ON SPORTS AGENTS

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Abstract: *For most people, the world of sports is regarded with great admiration, respect and emotional solidarity. Very few of us wonder what happens to these super humans after they reach the end of their sport career. Any company that hires a former athlete can soon after see the difference that such a person can make in a team of professionals. The aim of the study is therefore to examine the situation of sports agents in the Romania and European Union and to identify, analyse and describe the questions that their activities give rise to as well as the solutions that have already been provided by public and/or private actors, thus enabling the European Commission to assess – on the basis of the data collected, the problems identified and the analyses carried out – whether intervention is required and, if so, at what level and in what form.*
Keywords: *professional reconversion, performance, employers, sports agents*

29. WAYS TO OPTIMIZE SERVICES MARKETING DECISIONS

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Abstract: *The present paper take into consideration the development of decision support systems in marketing and highlight the main areas in which marketing decisions can be optimized. In a turbulent marketing environment as it is today, optimizing decisions represents the main task of any management level. Nowadays organizations can build effective marketing strategies only if they possess the tools and knowledge to plan and implement decision support systems. In the field of services marketing the dynamics of marketing environment, along with the greater involvement from the customer point of view determine a stronger relationship between performance and the decisions optimization process. Thus, it becomes imperative for services providers to anticipate and implement an optimal flow of decisions in order to maximize their answer to the environment change.*
Key words: *marketing models, decision support systems, marketing strategy, strategic planning*

30. STEREOTYPES IN INTERCULTURAL COMMUNICATION

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Abstract: *In human behavior stereotyping traces back in old times. People in all cultures, and in all times, have this tendency of categorizing and arranging the others into separate classes according to their behavior, or certain character traits. We should admit that our way of thinking may be altered by the existing assumptions about representatives of a certain group, nation, ethnicity, cultural background, without filtering the information we get about those people, or trying to see if certain characteristics also apply to them.*

It is in human nature to stereotype, to "label" our peers by applying generalizations to individuals. Stereotypes, be them racial, based on people's look, or on gender, or religion, still persist in any society, since

it is easier for people to deal with a certain situation if they generalize a group of people. Not rarely may we hear people characterizing an overweight person as a lazy, a Muslim as a terrorist, a Russian as a vodka drinker, a German as a Nazi, a Scottish as stingy, and so on. Sometimes we may refuse to think otherwise, considering that these characteristics have been verified by others. We hurry to pre-judge and include people in known and pre-set categories, not understanding and not considering cultural differences, of which we should be aware in communication.

This paper aims to present information on different types of stereotypes, related concepts, i.e. prejudice, or discrimination, and the way they affect people, with an application to seafarers, and maritime cadets. Through exposure to seafarers of different nationalities, in multinational, multicultural crews, seagoing people must learn to cope with stereotypes in order to avoid misunderstandings, or potential conflict.
***Keywords**: stereotypes, prejudice, discrimination, cultural differences, multinational crew, multicultural crew*

31. SIMILITUDES, ORDER OF THINGS AND THE PROSE OF THE WORLD

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***Abstract:** Michel Foucault's The Order of Things: an Archaeology of the Human Sciences transformed Foucault in an intellectual figure in France.*
As Foucault states right in his introduction, it was not his intention, on the basis of a particular type of knowledge or body of ideas, to draw up a picture of a period, or to reconstitute the spirit of a century. What he wished to do was to present, side by side, a definite number of elements such as the knowledge of living beings, the knowledge of the laws of language, and the knowledge of economic facts, and to relate them to the philosophical discourse that was contemporary with them during a period extending from the seventeenth to the nineteenth century.
The hereby paper focuses on the way in which Foucault offers a global analysis of what knowledge meant – and how this meaning changed – in Western thought from the Renaissance to the present. At the heart of his account is the notion of representation in philosophical thought, where we find Foucault's most direct engagement with traditional philosophical questions.
***Keywords:** similitudes, relations, sympathy, communication, signature*

32. FEMINIST READING OF WILLIAM SHAKESPEARE'S *KING LEAR*

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Abstract: *Feminism has always had its defenders and foes, especially in literature. For example, the study of the individual women characters in Shakespeare's King Lear has become an increasingly important part of the play's scholarship. For more than 30 years, other different interpretations of the play have been found. On one hand, it is asserted that this is a play about power, property and inheritance; or it is thought that King Lear shows us the dangers of not following the old ways of the patriarchal order.*
Therefore, while reading King Lear we may ask ourselves, for instance, if the female characters are stereotyped or if we have to ascertain Cordelia as the representative of goodness and her sisters as evil women. The main objective of the present paper is to answer similar questions and to try to highlight aspects referring to human nature when dealing with feelings.
Keywords: *feminism, behavior, identity, masculine powers, anti-feminism*

33. CONCEPT OF RIGHT OF INFORMATION ABOUT ENVIRONMENT

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Abstract: *The recognition and protection of human rights and citizens' rights are a key criterion for legitimacy of any government as an institution. The main areas of public life are based on the different activities to meet the basic needs of the people. They exist on three levels - spiritual and physical reproduction of human beings as biological and social beings, material production and social governance. They are based on the functional structure of the society. Social function based on a broad range of activities related to the inclusion of members of the public in social life. Economic function activity in the creation of material goods. Governing function is associated with implementation activities guide the conduct of members of the public.*

The main priority of the environmental government policy is to improve the quality of life of the population of Bulgaria. For this purpose it

is necessary to improve the quality of groundwater and surface water and air, and also to optimize waste management. Among the actions of government policy implementation included the provision of adequate information about the state of the environment.
***Keywords**: human rights, environment protection policy, right of information*

34. METRICAL THEORY OF Θ-EXPANSIONS

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***Abstract**: In this paper we study the continued fraction expansion of a number in terms of an irrational θ from (0, 1). We will call this new expansion of positive reals θ-expansion. The purpose of this paper is to solve a Gauss-Kuzmin theorem for θ-expansions. In order to solve the problem, we apply the theory of random systems with complete connections extensively studied by Iosifescu and Grigorescu.*

35. THE PHYSICAL TRAINING AND THE SPORTS IN THE NAVIGATORS EDUCATIONAL SYSTEM. AN ORIENTATION IN THE SPECIFIC EDUCATION OF THE FUTURE NAVIGATORS

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***Abstract:** The navigation across the seas and oceans of the world is an important and a very special domain and it requests a highest level speciality training to the young students, as well as a perfect physical and psycho-motional training.*

The usual practice shows that the Romanian Fleet sailors as well as the others in the international world, have to face a serious tempest, no matter how big or latest science expression of their ship can be. That's simply nature!

At those moments the survival of everyone deeply depends on the specific psycho-motional skills the sailor, no matter the position in the

hierarchy of the ship, has to act in accordance to them to practically fulfill his duties at anytime, aboard the ship.

36. A COMPLEX APPROACH TO SEE WHAT'S THE TEACHER PERSONALITY, INDEED PSYCHO-SOCIAL AND PSYCHOLOGICAL PROFILE OF THE TEACHER SPECIALIZED IN SPORTS TRAINING

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Abstract: *It is very well known that the physical training and sports teacher has a complex activity, touching almost all domains concerning the forming and perfecting the human being. The physical training and sports teacher coordinates the general way to reach the ideea of the outstanding old saying of the latin antiquity „Mens sana in corpore sano", which defines the forming branch of the human being. And, more than that he tries to train psycho-physically and also from intellectual point of view the human being in order to improve it constantly, until reaching the performance level from physical and psychical and intellectual point of view as well.*

The present work will try to offer as much thoroughly as possible the (partially) results of some larger researches and conducted observations, made by the authors in order to act as the multi-dicliplinarity character of the teacher and presenting the need he has to have very many qualities and a serious training in his position. And having his tasks to form and improve the necessary physical and psychological qualities to the young generations.

Keywords: *The multidisciplinar specialist, the versatility (polyvalent feature), technical person, educator, scientist, organizer, passionate, temperament, propensity, endowement, etc.*

37. CAN "VOICE OF AMERICA" BE A RESOURCEFUL SITE FOR ESP TEACHERS?

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Abstract: *It has long been demonstrated that the Internet can be turned into a very rich data bank from where teachers can select ready-made materials, can access information to cater for different topics, find images to illustrate their lessons, create assessment sheets or produce quizzes which can be used both in class or as homework materials. Nevertheless, sometimes teachers, especially when it comes to ESP, feel lost and do not know which sources can be reliable or which are appropriate for use in class. The aim of this paper is to bring to your attention a very resourceful site for teachers teaching in the military, Voice of America (VOA), and to exemplify how the materials found on this site can be turned into valuable teaching materials aiming at all four skills: listening, speaking, reading and writing, with a focus on Listening.*
Keywords*: Internet, VOA, ESP, Listening teaching materials*

38. TO CHOOSE OR NOT TO CHOOSE? – OR HOW TO SELECT THE MOST APPROPRIATE INTERNET SITE FOR TEACHING PURPOSES

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Abstract: *The Internet nowadays has become the most resourceful data bank for teachers around the world. There is not any single topic that a teacher would think about which could not be found on the Internet. There are numerous sites which provide ready-made lesson plans, loads of grammar exercises, hundreds of quizzes and many other resources which can be easily turned into teaching materials. However, when it comes to deciding which site is best for use in class, teachers sometimes feel lost and not always the searching engines provide them with the best resources. The aim of this paper is to offer a selection of sites, grouped according to a specific purpose, with explanations about what can be found in each group.*
Keywords: *Internet sites, teaching materials, ESP*

39. A MULTI-FACTOR AUTHENTICATION SCHEME INCLUDING BIOMETRIC CHARACTERISTICS AS ONE FACTOR

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Abstract: *Multi-factor authentication schemes have been proved to be very useful in many authentication systems including biometric ones. In this paper we have proposed a multi-factor authentication scheme, in which one of the main components is represented by the generation of a token and a password (known as the kernel of the multi-factor scheme) and another component is represented by a module which will take one of the biometric characteristics (face image, handwriting, holographic signature). The token ID and pass codes generated values will be encrypted and decrypted with RSA. We will show how the scheme works using a simulator that we have developed for this goal.*

40. HUMAN RESOURCES IN THE ORGANIZATION AND THEIR MOTIVATION

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Abstract: *Motivating human resources organization has had an increasing impact on the functionality and performance of the organization. Both the diversity of reasons why people act in a certain manner and incentives that managers can use to motivate employees leads to the existence of multiple forms of motivation. The evolution of an organization can override some kind of forms of motivation.*

Keywords: *human resources, organization, motivated, goals*

41. CHANGE IN ORGANIZATIONAL CULTURE

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Abstract: *Organizational culture has a number of effects on the socio-economic results of the organization as an open system on its employees and the management practiced in the organization. Research on organizational culture change are reduced. Therefore, creating a new corporate culture through an important change brought existing organizational culture is a complex and lengthy process.*
Keywords: *organizational culture, organizations, effects of organizational change*

42. TAXATION OF SEA CREW ACCORDING TO BULGARIAN LAW

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Abstract: *The aim of this paper is to present the tax policy of Bulgaria, concerning sea crew, new moments of treating the incomes of sea crew according to Bulgarian law.*

43. ASPECTS REGARDING THE ACOUSTICS OF A LECTURE HALL

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Abstract: *A lecture hall is a room where Speech Intelligibility is the primary acoustical parameter that needs to be evaluated. A second but a very important parameter is Reverberation Time. By investigating these two parameters one can evaluate if a lecture hall is suitable for teaching. In this paper, the authors discuss the importance of the acoustics of a lecture hall and the influence of various parameters over speech transmission from the speaker – the professors to the listeners – the students. As an example, a lecture hall of 120 seats is investigated using virtual simulations with ODEON software. Besides the acoustical parameters like STI (Speech Transmission Index) and RT (Reverberation Time), other parameters like room geometry and seat placement are discussed. In the end, some remarks are made regarding the measures that room designers must made to build a proper learning lecture hall.*
Keywords: *lecture hall, speech transmission index, reverberation time, room acoustics*

44. SOUND PROPAGATION MODELLING IN A LECTURE HALL

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Abstract: *For lecture halls, intelligibility of speech is the most important aspect. To achieve a relative uniform distribution of sound among the listeners, a number of parameters must be taken into account. One method to speed up the design process of a lecture hall is to model the sound propagation in that room using computer acoustic software. In this paper, the authors have chosen a lecture hall from Naval Academy and made numerous simulations to discover what are the week points regarding the acoustics of this room. The acoustical parameters obtained from simulations are compared with the desired ones and a few propositions for the improvement of the room are made.*
Keywords: *room acoustics, lecture hall, room acoustics modeling software*

45. RECOGNITION OF FACES IN THE CROWD USING BIOMETRIC TECHNOLOGIES MIXED

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Abstract: *This paper aims to develop under Microsoft Visual Studio, a practical application detection and recognition of people using Haar classifiers in conjunction with an algorithm personal centroid detection of eye gaze direction. The method uses biometric technology cubic interpolation.*
To describe as the best option data and identify them in a two-dimensional space we used principal component analysis (PCA). Using PCA, we can identify two-dimensional plane which best describes the varied data. The work aimed at obtaining recognition rate of 100% and a real-time processing.
Keywords: *PCA, cubic interpolation, classifiers, faces recognition, HAAR-like, centroid*

46. OPTIMAL CLASSIFICATION USING RBF FOR FACE RECOGNITION

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Abstract: *Classification analysis work performed by radial based function networks (RBF). I watched to obtain a minimum number of incorrect classifications based on image processing using features extraction algorithm using a variable number of pixels in each image analysis.*
I determined the optimal performance for a minimum number of pixels processed and RBF unit for radius. This was achieved by two representations of data: Gaussian function, Euclidean distance and Gaussian function, Manhattan distance.
At the same time I realized and a representation of performance classification by radius, number of RBF units and processing time. Finally we concluded the best efficacy experiment.
Keywords: *Radial based function networks, systems vector machine, support vector number, incorrect classifications, pixels.*

47. AMBASSADORS ON-BOARD SHIPS

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Abstract: *In the globalization era, the crew on board ships is overwhelmed by cultural diversity, thus creating an intercultural environment. However, in a very ample way, this intercultural environment represents a big part of the globalization process. In this case, when we refer to the globalization process, we must not forget what it creates; migration that leads to intercultural spaces and during a sailing operation around the world, these spaces are easily created on board a ship. Of course, there are a lot of problems between the crew members that could be born due to cultural diversity, but the matter that will be discussed in this article would be rather how to prevent the problems from happening than offer a solution to them. Furthermore, a simple solution is the education of the crew before embarking on a ship, not only in safety methods in an unpredictable accident on board, but also in training them how to become ambassadors of the country they represent by promoting their own cultural icons. This matter consists of great importance, due to the fact that in the world, there are over 1.250.000 sailors out of which 34.000 come from Romania [1] These individuals represent people that could receive impact from another culture on board of a ship or bring impact to their fellow crew members, thus attracting for their country tourists or foreign investments, depending of*

course on the type of impact they bring; positive or negative. Furthermore, the impact that the crew members bring in honor to their country could represent a key factor to economy growth, thus the ambassador training class could be highly benefits.

Keywords: *ship, culture, icon, globalization, crew, board, training, ambassador, agent, change, individual, world, international, member, society, politics, economics.*

48. USING HIDE WATERMARK IN VISUAL WATERMARK EXTRACTION. ADVANTAGES. ALGORITHM.

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Abstract: *Any embedded watermark as a guest image into a host image should use an embedding function that offers specific characteristics to the visual watermark, on the side of the host image's owner or sender, for security reason. On the other side, of the receiver, the host image is visual marked by the watermark object. The sender could offer to the receiver a software tool that purposes to eliminate the watermark in such a way that the output image to be clear, 100% as the original one. This process of visual watermark extraction is based on the inverse embedding function. This function could be different from stream to stream or even from image to image. The function identification could be done using the hide watermark information, embedded into the host image. The algorithm is presented together with the main advantages of the method.*

49. IMAGE PROTECTION. A FRAMEWORK PROPOSAL.

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Abstract: *Actually the image protection is based on the attached information to the main image information and presented as a container. Any player or browser uses plugins that extract the image in order to be properly played. But also it allows that the image to be saved separately, without additional info attached. More, basically all the pictures in Facebook or Twitter are detached by the extra information. Therefore the only way to keep the info into any image is to embed it, as the watermarking technology describe. Based on former research, here is presented a specific framework able to protect pictures and images stream.*

50. LE CINÉMA ET LE PLAISIR DRAMATIQUE

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Abstract : *Depuis toujours les artistes ont conçu des œuvres d'art non seulement pour eux-mêmes, mais pour les autres en particulier. N'ayant d'autre visée que la réussite de leurs œuvres, les artistes ont pour mission de susciter le plaisir chez les autres, chez le public. Susciter le plaisir et l'intérêt a précisément pour principe d'éveiller des tensions et des émotions. Animé par un désir de jouissance, le public se laisse porter car la recherche du plaisir, conjuguée à l'amour-propre, apparaît comme une énergie inhérente et nécessaire à l'action de l'homme.*

A la base de cet article, se trouve la conviction qu'il est possible de comprendre l'attrait du cinéma comme un formidable révélateur de plaisir. Effectivement, on va démontrer comment les films arrivent à susciter du plaisir chez le spectateur. Pour y arriver, nous allons définir le concept de plaisir dramatique et ses principes, et nous allons analyser comment les réalisateurs se sont guidé dans leur oeuvre cinématographique sur ces principes pour créer le suspense, c'est-à-dire susciter des sensations fortes chez le spectateur afin de le contraindre à rester impliqué dans le film jusqu'à sa fin. En d'autres termes, le suspense, comme inspiré de la mécanique de la tragédie grecque, est une combinaison du danger imminent, de la position supérieure du public, de l'identification avec le personnage

tout ça bien consolidé par la structure du récit, pour que, avec chaque scène et avec chaque séquence, le suspense soit plus élevé que dans la précédente jusqu'à l'apogée de l'émotion et du plaisir dramatique.
Mots-clé *: cinéma, plaisir dramatique, suspense.*

51. ELEMENTS AND RESOURCES FOR THE CREATION OF NEW TERMS IN THE ROMANIAN MARITIME TERMINOLOGY

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Abstract: *Like many other terminologies, the maritime terminology developed in the second half of the nineteenth century, through the translation of foreign textbooks related to the field of navigation. The translation of such documents was done in several ways, allowing the creation of new maritime terms in various ways: through linguistic loans, through word translations, through linguistic calques, by using the internal processes of derivation and composition, etc. Therefore, most of the Romanian maritime terms are neologisms. These lexical innovations are entrenched in the Romanian language because they needed to adapt to new realities and changing societal needs.*

The Romanian maritime terminology involves a certain multilingualism. Sailors, forced to communicate in a foreign language to understand and make themselves understood, tended to imitate the languages of those with whom they came into contact, be they French, Italian, German, Spanish, English etc. Consequently, because of the many loan words that have enriched its structure, the maritime vocabulary is highly heterogeneous. Some of these terms have a single etymological source, such as: abandon, alură, amara, anemograf, anemometru, baliză, banchet, barograf, bastingaj, belier, capot, cart, catapultă, carlingă, derivor, deroşeză, epavă, etambreu, hublou, iaht, lusin, madrieră, manşon, panou, pilot, ponton, radă, sabord etc. Other maritime terms have multiple possible etymologies, or more precisely an uncertain etymology, such as: Rom. balast < Fr. ballast, cf. Engl. ballast, Rom. balenieră < Fr. balenière, It. baleniera, Rom. bord < Fr. bord, It. bordo, Germ. Bord, Rom. bric < Fr. brick, It. brik, Germ. Brick, Rom. brigantină < It. brigantino, Fr. brigantine, Engl. brigantine, Germ. Brigantine, etc. A small part of the Romanian maritime terms have unknown origins. In the case of the following terms, for example, an acceptable etymon, both phonetic and semantical, couldn't be identified: rai „wooden wheel on which ropes are rolled"; rujar „port

worker"; saulă, şcondru, verfafor, bandulă, etc. There are also some maritime terms which have a controversial etymology. This type of neologisms can be explained either through loans or through internal means, such as the derivation or the semantic neology. Such is the case for the Romanian words braţ, măr, picior, etc., whose forms come from Latin, but which have considerably enriched their meanings through the semantic calques of foreign origin, mostly French and English.

***Keywords**: linguistic loan, linguistic calque, maritime term, French origin, word formation.*

52.LANGUAGE INTERFERENCE TRIGGERED BY BILINGUALISM

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***Abstract:** The linguistic contact results in linguistic interferences. The purpose of this paper is given by language interferences, which can be regarded as the transfer of elements of one language to another in terms of lexis, grammar, phonology or orthography alterations. Irrespective of the aspect of the linguistic interference as a result of a contact between languages, the starting point is always a certain degree of bilingualism. This paper is an attempt to outlay and analyse some of the various aspects with respect to language interferences as a result of bilingualism. This purpose has largely determined the general plan of the paper.*

***Keywords**: language interference, bilingualism, linguistic contact, borrowing, linguistic transfer*

53. THE SIGNIFICANCE OF LANGUAGE AS A TOOL OF COMMUNICATION

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***Abstract:** Language is essentially a means of communication among the members of a society. The purpose of this paper is to show that a common*

language is one of the most important features of a community and the ceaseless use of the same language is the most certain proof of the historical continuity of a community of people. The need to communicate triggers both the occurrence and the development of a language and this need arises and becomes stronger and stronger when one has someone else to communicate with, i.e. where there is a society. In terms of linguistics, the study of language is a multidisciplinary endeavour. Communication takes place not only orally, but also in writing. It is this plurality of aspects in studying the same object that makes language a perpetual phenomenon.
Key words: *language, communication, social community, common culture*

54. ABOUT SOME KKT-TYPE RESULTS IN LOCALLY CONVEX CONES

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Abstract: *The aim of this note is to present some Korovkin type-approximation results in locally convex cones.*
Key words*: locally convex cones, Korovkin - closure*

55. THE CHALLENGE OF TERRORISM – CONTINUITY AND CHANGE IN THE POST POST – COLD WAR ERA

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Abstract*: Considered by some as the meta-event of the XXIst century, the 9/11 terrorist attacks have brought to the center of debate a phenomenon with ancient origins which has undergone a significant change since the end of the Cold War. With the destruction of the twin towers, we have seen a major shift of political terrorism in a new form, irrational, unpredictable*

and difficult to control and this trend was reconfirmed by the attacks in Madrid, London, Beslan, Domodedovo, Chicago or Paris to name just a few. The major impact of the terrorist attacks was threefold: they eliminated the confidence, affirmed at the end of the Cold War by the liberals, in the peaceful future of the international system, they shocked the international public opinion by destroying the image of the invincibility of the U.S., and they highlighted the vulnerability of Western states, showing, among other things, the perverse effects of globalization. Also, we cannot ignore the renewal and development, within this context, of the discussion regarding the changing nature of warfare, the profile of the new asymmetric combatant and the states` decisions to adopt controversial policies or reorientation of national security strategies and international actors` (states and organizations) decisions to move the terrorist threat from the periphery to the center of the security agendas. Asserting new terrorism as a severe threat to international security generated a major impact on academics, among theorists that contribute to the development of security studies discipline. Whether they assumed a traditional perspective, state centered and militarized, or they militated for the extending/deepening of security, all considered terrorism as a challenge that requires a thorough analysis of the new realities. This article aims to identify the elements of continuity and change in the new international order, highlighting a number of paradoxes that seem to shape the post post - Cold War security environment.
***Keywords**: Terrorism, assimetric threat, security studies, post post-Cold War*

56. VALUE ORIENTATION OF THE ELDERLY AS A FACTOR IN THEIR SOCIAL SELF-ESTEEM AND SOCIAL ADAPTATION

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***Abstract**: The value orientation of the individual is the basis of society and formed the outlook of man belongs to important factors for adaptation to a dynamically changing social environment. The main function of the values and value orientation is regulating the behavior of individuals in certain social conditions.*
***Keywords:** individual, adaptation, behavior, conditions.*

57. THE ADULT LEARNER AS A SUBJECT IN TRAINING

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Abstract: *In the current socio - economic situation has a particularly topical issue of adult education. The labor market requirements placed on education, training and retraining of specialists in the course of their career development. Due to the negative development of the demographic processes, the only alternative to compensate for the shortage of staff is to improve their quality characteristics by a higher level of education and professional qualification. State and development of the system of education and training is crucial for the acquisition of competencies relevant to the needs of the knowledge economy and information society.*
Attitude towards the old man as an active participant / subject / learning process, given its social features, provides principles of modern education.
It is necessary to determine the specific characteristics of the adult learner as a subject of training, which will play the role of the factors necessary for the planning and organization of the learning process:
• leading role the learner;
• adult learners to seek self-fulfillment, independence and self-government;
• he has a certain life experience, which can be used as an important source for training;
• the training he acquired knowledge and skills to solve important life problems and achieve specific goals;
• in the process of training into practice mastery of knowledge, skills and competences; the learning process is organized as a joint venture between trainer and trainee and etapite- includes planning, implementation, evaluation and correction.
• The school activity is influenced significantly by time, space, residential, professional, and social factors.
Keywords*: education, development, professional qualification, knowledge*

58. THE ALGORITHM FOR GENERATING AND COMPUTING THE SUBGRAPH DEFINED BY *k* GIVEN VERTICES

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Abstract*: This paper introduces the concept of value for a subgraph with k given vertices and weighted edges. In the following will be described how this subgraph be generated and how the graph's value is computed. The paper presentsalso a C++ written program that implements the mentioned algorithm. Furthermore, we will present an example of how this program can be used and integrated.*
Key words: *graph, subgraph, compute, algorithm, program*

59. ALGORITHM FOR GENERATING ALL *k* VERTICES SUBGRAPHS AND FINDING THE VALUES FOR EACH OF THE SUBGRAPHS

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Abstract: *In this paper we will prove how all subgraphs with k vertices and weighted edges of a graph can be generated and how can be computed the value of each subgraph. The paper will include a written C++ program that implements the presented algorithm. Moreover, a use case scenario for this algorithm will be described.*
Keywords*: graph, subgraph, compute, algorithm, program*

60. TEACHING AND COMMUNICATING IN THE ESP WORLD

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Abstract: *Teaching ESP has always been aimed at developing students'skills of professional communication in English no matter the area of their professional expertise. Literature is reviewed and analyzed in an attempt to give teachers practical advice in three areas within the field of instructional communication: classroom guidance, student learning, and self-presentation. Specifically, nonverbal immediacy and social message strategy employment are discussed as options for improving classroom management and for reinforcing student learning. Suggestions for the proper use of tests and evaluations to boost learning are also addressed. Research on teacher strategy and style are considered as operational instructional strategies. Other factors that students focus on when evaluating teachers' performance are re-evaluated and classroom applications are discussed.*
Keywords: *communication, language learning, challenges, teaching, performance evaluation.*