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Foreword

Welcome to the Journal of Information Systems & Operations Management (ISSN 1843-4711; IDB indexation: ProQuest, REPEC, QBE, EBSCO, COPERNICUS). This journal is an open access journal published two times a year by the Romanian-American University.

The published articles focus on IT&C and belong to national and international researchers, professors who want to share their results of research, to share ideas, to speak about their expertise and Ph.D. students who want to improve their knowledge, to present their emerging doctoral research.

Being a challenging and a favorable medium for scientific discussions, all the issues of the journal contain articles dealing with current issues from *computer science*, *economics*, *management*, *IT&C*, etc. Furthermore, JISOM encourages the cross-disciplinary research of national and international researchers and welcomes the contributions which give a special "touch and flavor" to the mentioned fields. Each article undergoes a double-blind review from an internationally and nationally recognized pool of reviewers.

JISOM thanks all the authors who contributed to this journal by submitting their work to be published, and also thanks to all reviewers who helped and spared their valuable time in reviewing and evaluating the manuscripts.

Last but not least, JISOM aims at being one of the distinguished journals in the mentioned fields.

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CONTENTS

Editorial

Ana Aguilera ***Ramon Mata-Toledo*** ***Alberto Subero*** ***Morgan Monger*** ***Pranshu Gupta***	*ON AN EXTENSION OF FUZZY AGGREGATE FUNCTIONS FOR DATABASES*	1
Costel Ceocea ***Dragos Cazacu***	*PROCEDURES AND METHODOLOGIES FOR THE ADOPTION AND IMPLEMENTATION OF THE CODE OF CORPORATE GOVERNANCE*	9
Ion Ivan ***Alin Zamfiroiu*** ***Dragoş Palaghiţă***	*TYPOLOGIES OF MOBILE APPLICATIONS*	21
Catalin-Antonio Dedu ***Costin-Anton Boiangiu*** ***Ion Bucur***	*A MAPPING SIMULATOR*	29
George Carutasu	*SUSTAINABLE INNOVATION IN COMPUTER COMMUNICATION AND MANAGEMENT*	35
Tăbușcă Alexandru	*HTML5 – A NEW HOPE AND A DREAM*	51
Gabriel Eugen Garais	*MODELING MAINTENANCE PROCESSESFOR DISTRIBUTED APPLICATIONS*	61
Ovidiu Solomon	*SOME TYPICAL SHAPES OF HYSTERETIC LOOPS USING THE BOUC-WEN MODEL*	73
Marilena-Roxana Zuca	*CONTROVERSY REGARDING ELEMENTS IN THE FINANCIAL STATEMENTS*	81
Sion Beatrice ***Mihălcescu Cezar*** ***Mărginean Alexandra***	*THE PASSAGE FROM AIRLINE RESERVATION SYSTEMS TO GLOBAL DISTRIBUTION SYSTEMS*	93
Alice Ţînţă	*FINANCIAL PERFORMANCE OF AN ENTITY IN THE EUROPEAN AND INTERNATIONAL ACCOUNTING STANDARDS*	105
Dragos-Paul Pop ***Alexe Cristina-Loredana***	*USING ORACLE BUSINESS INTELLIGENCE TO ANALYZE COMPANY RESULTS AND CREATE STRATEGIES*	117
Gheorghe-Iulian Ioniță ***Ștefania-Diana Ioniță-Burda***	*SOME ISSUES ON THE LEGAL PROTECTION OF COMPUTER PROGRAMS*	129

Manolache Florentina Cristina ***Sofron Angela*** ***Stanciu Adelina*** ***Costin-Anton Boiangiu***	*STUDY ON THE OPTIMIZATIONS OF THE HOUGH TRANSFORM FOR IMAGE LINE DETECTION*	141
Mihai Zaharescu ***Ionuţ Cosmin Petrescu***	*EDGE DETECTION IN DOCUMENT ANALYSIS*	156
Andrei Tigora	*A DOCUMENT IMAGE ANALYSIS SYSTEM FOR EDUCATIONAL PURPOSES*	166
Ahmad Alomari	*IMPLEMENTING RSA ALGORITHM FOR FULLY DISTRIBUTED CERTIFICATE AUTHORITY IN MANET*	176
Mihai Liviu Despa	*THE ADAPTIVE NATURE OF MANAGING SOFTWARE INNOVATION*	184
Qassim Al Mahmoud	*SECRET SHARING SCHEME BASED ON INTEGER REPRESENTATION*	192
Ana Maria Bobeica	*A COMPREHENSIVE ANALYSIS OF THE MARKETING MIX COMPONENTS IMPACT ON THE QUALITY OF HEALTHCARE ACTIVITY*	200

ON AN EXTENSION OF FUZZY AGGREGATE FUNCTIONS FOR DATABASES

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Pranshu Gupta[4]

ABSTRACT

Today, Fuzzy sets and fuzzy logic are used in many applications areas such as control, instrumentation, resource management, and databases just to name a few. In this paper, the authors present an extension of fuzzy aggregate functions in the context of fuzzy databases. The paper is not intended as a complete examination of relational databases and the SQL language.

Keywords – Fuzzy logic, Fuzzy sets, Aggregate, Fuzzy operator, Fuzzy relations.

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PROCEDURES AND METHODOLOGIES FOR THE ADOPTION AND IMPLEMENTATION OF THE CODE OF CORPORATE GOVERNANCE

Costel Ceocea[1]
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ABSTRACT

The authors proposes in this column a brief overview of the concept of a fully designed software application that aims to implement the Corporate Governance Code at all levels of large company.

Here they are stressing the importance and the details of the state of the art technology and concepts on how to Adopt, Implement and Evaluate the Corporate Governance Code in practice and what the benefit of challenges of this implementation might be.

Key Words: Corporate Governance Principles, Management and Organizational Performance Evaluation, Scoring Assessment, Key Performance and Trend Indicators, Corporate Behavioural Valuation

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TYPOLOGIES OF MOBILE APPLICATIONS

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ABSTRACT

Mobile applications and their particularities are analyzed. Mobile application specific characteristics are defined. Types of applications are identified and analyzed. The paper established differences between mobile applications and mobile application categories. For each identified type the specific structures and development model are identified.

***Keywords*: Mobile Applications; Typologies; Characteristics; Application Development**

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A MAPPING SIMULATOR

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ABSTRACT

This paper approaches the domain of mapping simulations and presents the result of subsequent research in path finding algorithms. The testing phase and the obtained results were carried by the means of an elaborate OpenGL application.

Keywords: mapping simulator, path finding, iRobot Roomba, OpenGL

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SUSTAINABLE INNOVATION IN COMPUTER COMMUNICATION AND MANAGEMENT

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ABSTRACT

In this paper will be emphasized common management processes and structures that sustain innovation in Computer Communication and Management. In the beginning, innovation concept and theory will be debated, together with governmental and European structures which support innovation. In the second part of article, some of specific university innovation structures are exposed and compared. Third section of paper presents some innovative products developed in university field. Last part will underline the results in sustainable innovation and future work related to this.

Keywords: **innovation, computer, communication, management.**

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HTML5 – A NEW HOPE AND A DREAM

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ABSTRACT

The present paper aims to discuss the introduction, use and future trends for using HTML5. After going through an entire collection of different flavors of the good old HTML – DHTML, XHTML – and adding a lot of other technologies like JAVASCRIPT, or CSS, the developers of the today IT environment must learn the new and ultimate HTML5 ☺. This technology aims to provide not only a more complex and robust HTML syntax (with more strict XML implications) but also to be able to replace JAVA or FLASH in contexts regarding graphic approaches.

Keywords: html5, css, javascript, dhtml, xhtmls, svg, xml

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MODELING MAINTENANCE PROCESSESFOR DISTRIBUTED APPLICATIONS

Gabriel Eugen Garais[1]

ABSTRACT:

Maintenance processes model include actions and tasks based on IT standards are part of the life cycle of distributed applications, making it necessary to ensure their easy assistance after deployment of the application currently in use.

Key words: maintenance model; maintainability; life span of the maintenance processes; distributed applications; collaborative systems; databases; GUI; maintenance processes; maintenance metrics; evaluation of maintenance processes.

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SOME TYPICAL SHAPES OF HYSTERETIC LOOPS USING THE BOUC-WEN MODEL

Ovidiu Solomon[1]

ABSTRACT

Bouc-Wen model possesses an appealing mathematical simplicity. It has the ability to portray the hysteretic behaviour of materials and devices. Using the Bouc-Wen equation for different values of loop parameters and imposed cyclic loading, typical shapes of hysteresis loops are obtained. Typical shapes of hysteresis loops are obtained using the Bouc-Wen equation for different values of loop parameters and imposed cyclic loading.

Keywords: Bouc-Wen model, hysteretic loops, system behaviour

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CONTROVERSY REGARDING ELEMENTS IN THE FINANCIAL STATEMENTS

Marilena-Roxana Zuca[1]

ABSTRACT:

The definitions of the elements identify their main traits, but their purpose, the reason for their presence in the financial statements is ensured by meeting the recognition criteria.

The current concerns of accounting regulatory organisms in setting and developing the elements and the common conceptual Framework have materialized by setting recognition criteria, that help to achieve a more accurate position of elements in the financial statements, thus creating credibility and relevance of the information contained within it.

This study follows, by comparison, recognition criteria of elements presented in financial statements in various accounting referential meaning.

Keywords: active, debt, equity, income, expense
Code JEL: M41 – Accounting

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THE PASSAGE FROM AIRLINE RESERVATION SYSTEMS TO GLOBAL DISTRIBUTION SYSTEMS

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ABSTRACT

Before global distribution systems such as Amadeus appeared, a revolutionary idea that triggered a chain reaction, changing the way people did business had emerged.

Throughout history a lot of ideas and inventions have come out, like the wheel, the steam engine, the printing press, the computer, the online environment etc. Such a revolutionary time was when airlines started to develop computerized systems to conduct their research.

Key words: global distribution systems, computerized reservation systems, Amadeus, reservation system

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FINANCIAL PERFORMANCE OF AN ENTITY IN THE EUROPEAN AND INTERNATIONAL ACCOUNTING STANDARDS

Alice Ţînţă[1]

ABSTRACT

This article is based on the idea that a powerful, competitive and functional economy, capable to face European challenges has to be performant. I approached the term of performance thinking of management value first. An enterprise creates value for its shareholders when the profitability of the invested capital is greater than the cost of different financial sources used. In other words, it is not enough to have accounting profit, in order to create value. After that, I analyzed performance in terms of efficiency and effectiveness, the combination between those two resulting in the level of performance of an enterprise.

Furthermore, I analyzed creative accounting and its role in maximizing enterprise performance. From an economic and an accounting point of view, the environment of an enterprise is full of uncertainties, which makes the elements of financial statements to be estimated and not measured with certainty. The way the management of an enterprise chooses the treatments and accounting policies, creates the possibility of a deliberate choice that responds with its interests, a choice that does not give a faithful image but more of a convenient one. Thus, appearing a distortion in the quality of financial information, creating uncertainties regarding the consistency and comparability of users' information, in which case we deal with a deliberate accounting, or creative accounting.

Keywords: performance, financial position, creative accounting, economic and financial indicator, overall result, financial reports.

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USING ORACLE BUSINESS INTELLIGENCE TO ANALYZE COMPANY RESULTS AND CREATE STRATEGIES

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ABSTRACT

Business Intelligence can be defined as the ability of an organization to collect, manage and organize data. This process brings in a large amount of data that can help develop new business opportunities. Identifying these opportunities and implementing efficient strategies can bring a competitive advantage on the market on the long term. In this article we will be analyzing the financial results over a 3 year period for a corporation that has 3 companies under its wing and the management strategy this corporation employed to raise their financial results.

Keywords: business intelligence, oracle OBIEE, decision support systems, financial results, OLAP, data warehouse.

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SOME ISSUES ON THE LEGAL PROTECTION OF COMPUTER PROGRAMS

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ABSTRACT

The issue of conciliating the copyright belonging to the author of a work to have protection over the material and moral interests deriving from his work and the society interest to have access to the work has made the subject of much debate. Scientific progress and the development of computer science are accompanied by issues related to the legal protection of computer software. Both internationally and regionally, regulations have been drafted that were also implemented (in one form or another) in national legislations. However, there are still several aspects that need further consideration.

Keywords: computer programs, legal protection, copyright, infringements, sanctions.

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STUDY ON THE OPTIMIZATIONS OF THE HOUGH TRANSFORM FOR IMAGE LINE DETECTION

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ABSTRACT

Skew detection for scanned documents is an important field of research, of great interest for both academic and commercial environments. The Hough transform has been established as the standard for accurate skew detection, thanks to its high accuracy and mathematical soundness. Unfortunately, this high accuracy comes with a high time penalty, and thus the search for speed improvements that do not reduce accuracy is on. The present article will present an impartial comparison of the proposed methods and point out each method strong and weak points.

Keywords: skew detection, deskew, Hough transform, OCR

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EDGE DETECTION IN DOCUMENT ANALYSIS

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ABSTRACT

The significant improvements in edge detection, vectorization, contour specification, and skeleton extraction that were made in the past years should be included in the document analysis pipeline. We discuss the general OCR system, introduce an edge detection specialized for characters, present a geometrical based preprocessing pipeline and open the door for further research in the communication of the OCR with the preprocessing stage.

Keywords: OCR, Edge Detection, Vectorization, Binarization

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A DOCUMENT IMAGE ANALYSIS SYSTEM FOR EDUCATIONAL PURPOSES

Andrei Tigora[1]

ABSTRACT

The Document Image Analysis System, shortly DIAS, is a modular software framework for image processing and information extraction. The system is comprised of various elementary executables, that form the processing backbone, as well as several GUI applications aimed at simplifying the configuration process and fixing errors that may appear during the actual image processing. The system is modular, and can easily be extended with more executables that fit into one of the predefined categories.

Keywords: Document Image Analysis, Retroconversion, Binarization, Skew Detection, Layout Analyze, Document Hierarchy, Document Export

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IMPLEMENTING RSA ALGORITHM FOR FULLY DISTRIBUTED CERTIFICATE AUTHORITY IN MANET

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ABSTRACT.

Mobile wireless ad hoc networks that are resistant to impersonating nodes are necessary for distributed systems used in security applications. Many secure protocols in mobile ad hoc networks depend on the public key infrastructure. Nodes in MANETs are still vulnerable to different kinds of attacks so multiple certificate authorities (CAs) distributed over the network, each with a periodically updated share of the private key, are usually adopted as a solution. Establishing a distributed virtual CA is an important tool to ensure the security of the mobile ad hoc networks. This article proposes a new scheme for RSA key-sharing scheme based on threshold secret sharing algorithm. In this scheme, the sub secrets are covered when the MANET makes the reconstruction of the polynomial function.

Keywords: MANET, RSA, Certificate Authority.

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THE ADAPTIVE NATURE OF MANAGING SOFTWARE INNOVATION

Mihai Liviu Despa[1]

ABSTRACT

The focus of this article is pointed at adaptive management in the context of innovative software projects. Software development is presented through the filter of innovation. The aspects that differentiate software innovation from any other kind of innovation are highlighted. Adaptive management is addressed from a general point of view. The circumstances that require adaptive management are emphasized. Methods of implementing adaptive management in innovation oriented software projects are submitted and practical examples resulting from personal experience are presented. Innovative software development projects are depicted as a suitable environment for recusant management approaches. The theories, information and facts enunciated throughout the article are summarised. A coherent picture of managing the development of innovative software is assembled.

Keywords: adaptive management, innovation, software development, project management

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SECRET SHARING SCHEME BASED ON INTEGER REPRESENTATION

Qassim Al Mahmoud[1]

ABSTRACT

In Shamir's scheme that the security based on the numbers of the field of a prime number P which the coefficients' polynomial reduced to modulo P (takes a value from some field Z_p, where P is a large prime number). Thus, the adversary must know only the free coefficient of the polynomial in order to break the scheme. From the representation integer using the so-called $g-adic$ expansion we can see any integer a can build such polynomial so that the polynomial has degree of k, k being the length digits for that integer a. Where the coefficients of that polynomial are taken from the set of $\{0,1,...,g-1\}^k$, we will introduce a small participation improving Shamir's scheme to share the secret S that will be seen constructed from the whole of the coefficients in the polynomial used, which is based on the representation integer.

Keywords: Shamir scheme, information dispersal, integer representation,

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A COMPREHENSIVE ANALYSIS OF THE MARKETING MIX COMPONENTS IMPACT ON THE QUALITY OF HEALTHCARE ACTIVITY

Ana Maria Bobeica[1]

ABSTRACT

The paper is based on a quantitative Analysis made on Romania's healthcare market in order to quantify the impact of some key elements of the marketing mix like the Price Component, Placement, Human Resource, Product and Placement/Location and the Healthcare Quality of Services and to establish the connection between the components from the Healthcare Managers point of view.

The study was made during April and May 2013 and explains the answers of more than 100 Healthcare Managers around Romania.

The results show a direct connection between the key elements analyzed and are the base of a future case study in the healthcare marketing field.

Key words: marketing healthcare, quality healthcare marketing, marketing mix

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