

2015 10th Iberian Conference on Information Systems and Technologies

(CISTI 2015)

**Aveiro, Portugal
17-20 June 2015**

Pages 1-770



**IEEE Catalog Number: CFP1503K-POD
ISBN: 978-1-4799-8330-8**

TABLE OF CONTENTS

RACING BASED APPROACH FOR METAHEURISTICS PARAMETER TUNING	1
<i>Pereira, Ivo ; Madureira, Ana</i>	
USING BINARY FRUIT FLY ALGORITHM FOR SOLVING THE SET COVERING PROBLEM	7
<i>Crawford, Broderick ; Soto, Ricardo ; Torres-Rojas, Claudio ; Pena, Cristian ; Riquelme-Leiva, Marco ; Johnson, Franklin ; Paredes, Fernando</i>	
ANALYSIS OF THE UTILIZATION OF WEB 2.0 RESOURCES IN SECONDARY EDUCATION AND ADVANCED VOCATIONAL TRAINING STUDIES	11
<i>Banda-Sierra, Federico ; Reinoso, Antonio J.</i>	
COLLABORATIVE EMERGENCY PREPAREDNESS: A DESIGN MODEL TO SUPPORT COLLECTIVE INTELLIGENCE IN EMERGENCY DRILLS	17
<i>de Miguel, Aurora ; Diez, David</i>	
ISO/IEC 27001 IMPLEMENTATION IN PUBLIC ORGANIZATIONS: A CASE STUDY	23
<i>Sussy, Bayona ; Wilber, Chauca ; Milagros, Lopez ; Carlos, Maldonado</i>	
AUTHORIZATION SERVICES OF THE EVIDA PLATFORM	29
<i>Augusto, Filipe ; Quintas, Joao ; Cardoso, Carlos ; Grade, Miguel ; Llerena, Yosvanny ; Queiros, Alexandra ; Rocha, Nelson Pacheco</i>	
IDENTIFYING ENGAGEMENT INDICATORS TO SUPPORT EDUCATIONAL RESEARCH	35
<i>da Rocha Seixas, Luma ; de Melo Filho, Ivanildo Jose ; Gomes, Alex Sandro</i>	
EVALUATION OF MOBILITY MODELS TO MOBILE NETWORKS IN EMERGENCY AND RESCUE SCENARIOS AVM, UPM, PURSUE, WAYPOINT AND BROWNIAN	41
<i>Tandazo, Rommel Torres ; Carrion, Samanta Cueva ; Gonzalez, Patricia Ludena ; Cueva, Karina Monteros</i>	
GRÖBNER BASES AND MATHEMATICAL EXERCISES GENERATION WITH NONDETERMINED STRUCTURE	47
<i>Araujo, Isabel ; Smirnov, Georgi ; Almeida, Jose Joao</i>	
DESIGN OF INFORMATION SYSTEM FOR THE LIQUIDITY RISK MANAGEMENT IN FINANCIAL INSTITUTIONS	52
<i>Arias, Jaime Alberto Echeverri ; Serna, Maria Andrea Arias ; Gomez, Juan Guillermo Murillo ; Kleine, Collin ; Arbelaez, Luis Ceferino Franco</i>	
EFFECTIVE MEETINGS: WITH A FOCUS ON THE EMOTIONS AND THE CONVERSATIONS TO IMPROVE THE CAPITAL IN THE ORGANIZATIONS	58
<i>Olguin, Eduardo ; Crawford, Broderick ; Soto, Ricardo</i>	
ONLINE TRANSPARENCY ASSESSMENT: THE CASE OF DIRECTORATE-GENERALS AND SIADAP	62
<i>Lourenco, Rui Pedro ; Moura e Sa, Patricia ; Veloso, Susana</i>	
IDENTIFICATION OF THE AFFINITY IN AUDIOVISUAL ADVERTISING BY USING ADAPTIVE VECTOR MODELS	68
<i>Bello, V.Camillo ; Pena, P.Alejandro ; Osuna, R.Sergio</i>	
CONCEPTION OF A FORMATIVE DISTANCE SERVICE ABOUT MODALITIES OF PAYMENT IN E-COMMERCE	75
<i>Teixeira, Tiago Donas Botto ; de Andrade, Antonio Manuel Valente</i>	
BINARY CAT SWARM OPTIMIZATION FOR THE SET COVERING PROBLEM	80
<i>Crawford, Broderick ; Soto, Ricardo ; Berrios, Natalia ; Johnson, Franklin ; Paredes, Fernando</i>	
SET COVERING PROBLEM SOLVED BY NEW BINARY FIREFLY ALGORITHM	84
<i>Crawford, Broderick ; Soto, Ricardo ; Riquelme-Leiva, Marco ; Pena, Cristian ; Torres-Rojas, Claudio ; Johnson, Franklin ; Paredes, Fernando</i>	
DESIGN OF AN INTELLIGENT SYSTEM TO SUPPORT THE DIAGNOSIS OF PATIENTS	88
<i>Flores, Jose Luis ; Aristizabal, Miguel ; Arias, Jaime Alberto Echeverri ; Marin, Camilo</i>	
HYBRID ALGORITHMS FOR SOLVING SUDOKUS	92
<i>Soto, Ricardo ; Galleguillos, Cristian ; Nino, Natalia ; Crawford, Broderick ; Paredes, Fernando</i>	
NEW TECHNOLOGIES TOWARDS COGNITIVE STIMULATION IN ELDERLY WITH DEMENTIA: EFFECTS AND POTENTIAL	96
<i>Miguel, Isabel ; da Luz, Helena Amaro</i>	
SELECTION CONSTRUCTIVE BASED HYPER-HEURISTIC FOR DYNAMIC SCHEDULING	102
<i>Gomes, S. ; Madureira, A. ; Cunha, B.</i>	
USING A MDD APPROACH TO DEVELOP SOFTWARE SYSTEMS	108
<i>Costa, Pedro Henrique Teixeira ; Dias Canedo, Edna</i>	

SCHEDULING SINGLE-MACHINE PROBLEM ORIENTED BY JUST-IN-TIME PRINCIPLES — A CASE STUDY	114
<i>Dantas, Joana D. ; Varela, Leonilde R. ; Madureira, Ana Maria</i>	
SHORTENING CHANGEOVER TIME — AN INDUSTRIAL STUDY	120
<i>Trojanowska, Justyna ; Zywicki, Krzysztof ; Varela, Maria Leonilde R. ; Machado, Jose M.</i>	
R24MÓVEL — 24 HOUR DIETARY RECALL MOBILE APPLICATION	126
<i>Ferreira, Marcus ; Percy, Lecio ; Holanda, Maristela ; Araujo, Aleteia ; Torres, Babiana ; Ito, Marina Kiyomi</i>	
TECHNOLOGICAL COMPETENCIES MAPPING: A PETROBRAS' INFORMATION SYSTEM FOR AIDING THE DECISION PROCESS BASED ON THE LATTES PLATFORM	131
<i>Alves, Alexandre Donizeti ; Yanasse, Horacio Hideki ; Dias de Souza, Jose Francisco ; Soma, Nei Yoshihiro</i>	
BINARIZATION FUNCTIONS FOR SHUFFLED FROG LEAPING ALGORITHM CAN SOLVE THE SET COVERING PROBLEM	137
<i>Crawford, Broderick ; Soto, Ricardo ; Pena, Cristian ; Riquelme-Leiva, Marco ; Torres-Rojas, Claudio ; Johnson, Franklin ; Paredes, Fernando</i>	
MATURITY MODELS IN THE HOSPITAL INFORMATION SYSTEMS MANAGEMENT INITIAL RESEARCH	141
<i>Carvalho, Joao Vidal ; Rocha, Alvaro</i>	
SOFTWARE DEVELOPMENT TIME ESTIMATION BASED ON A NEW NEURO-FUZZY APPROACH	147
<i>Garcia-Diaz, Noel ; Garcia-Virgen, Juan ; Farias-Mendoza, Nicandro ; Verduzco-Ramirez, Alberto ; Martinez- Bonilla, Rene ; Chavez-Valdez, Evelia ; Macias-Chapula, Humberto ; Soriano-Equigua, Leonel</i>	
THE ACCEPTANCE MODEL OF ONLINE LEARNING BY FACE-TO-FACE HIGHER EDUCATION STUDENTS	154
<i>Martinho, Domingos ; Jorge, Idalina ; Brites, Rui</i>	
EVALUATING LOCAL E-GOVERNMENT MATURITY IN SELECTED IBEROAMERICAN COUNTRIES	159
<i>Maciel, Gustavo Gouvea ; Gomes, Helder ; Dias, Goncalo Paiva</i>	
MODEL FOR MONITORING AND CONTROL OF SOFTWARE PRODUCTION IN DISTRIBUTED PROJECTS	166
<i>de Souza, Vanessa Faria ; L'Erario, Alexandre ; Fabri, Jose Augusto</i>	
A STUDY OF THE APPLICABILITY OF AN AGILE METHODOLOGY SCRUM ALLIED TO THE KANBAN METHOD	172
<i>Ferrao, Sammara Ellen Renner ; Dias Canedo, Edna</i>	
A VIEW ON THE USE OF ICT IN SMES IN PANAMA	178
<i>Munoz, Lilia ; Pitti, Piscis</i>	
STRAIGHTEN OF THE NEXTI PROCESS TO THE MPS-BR AT G LEVEL	182
<i>de Satis, Alan Jhones Rodrigues ; da Cunha, Paula Luciana Ferreira</i>	
DIAGNOSTIC ON TEACHING-LEARNING OF SOFTWARE DESING BY USING THE PERSONAL SOFTWARE PROCESS FRAMEWORK	189
<i>Gasca-Hurtado, Gloria Piedad ; Alvarez, Maria Clara Gomez ; Manrique-Losada, Bell ; Arias, Dennis Magali</i>	
EDUCATIONAL METADATA ONTOLOGY ENRICHMENT FOR E-ASSESSMENT SEMANTIC DESCRIPTION. TOWARDS QUESTION AND TEST INTEROPERABILITY AND REUSE	196
<i>Romero, Lucila ; Gutierrez, Milagros ; Caliusco, Ma.Laura</i>	
MAXIMIZING RETURN ON INVESTMENT WITHOUT INCREASING PROJECT RISKS — NEAR-SHORING AS A KEY PRACTICE ON A BUSINESS TRANSFORMATION PROGRAMME: CASE STUDY ON A TRAINING PROJECT FOR A GLOBAL CONSUMER GOODS COMPANY	202
<i>Guedes, Jorge F. ; Pereira, Leandro</i>	
ANDIMAGE: AN ADAPTIVE ARCHITECTURE FOR NUDE DETECTION IN IMAGE	208
<i>Santos, Clayton ; Souto, Eduardo ; dos Santos, Eulanda M.</i>	
OPEN SOURCE FOR PUBLIC ADMINISTRATION: J2GOV — JOOMLA TO GOVERNMENT	214
<i>Martins, Pedro Matos ; Pereira, Antonio</i>	
INFORMATION SECURITY IN IMPLEMENTING WEB APPLICATIONS FOR SMALL BUSINESSES BASED ON COBIT5-SI	220
<i>Jaramillo, H Danilo ; Guaman, B Franco ; Salazar, E Kruskaya</i>	
DEFINITION OF CYBERSECURITY BUSINESS FRAMEWORK BASED ON ADM-TOGAF	226
<i>Danilo Jaramillo, H. ; Cabrera, S.Armando ; Abad, E.Marco ; Torres, V.Alfredo ; Verdum, Jose Carrillo</i>	
LEARNING PLATFORM: EMOTIONAL LEARNING	232
<i>Faria, Ana Raquel ; Almeida, Ana ; Martins, Constantino ; Goncalves, Ramiro</i>	
ADOPTION OF ICT IN THE AGING: SYSTEMATIC REVIEW BASED ON ICT FOR ALZHEIMER'S DISEASE AND OTHER SENILE DEMENTIAS	238
<i>Martinez-Alcala, C.I. ; Pliego-Pastrana, P. ; Lopez-Noguerola, J.S. ; Rosales-Lagarde, A. ; Zaleta-Arias, M.E.</i>	

Q-LEARNING BASED HYPER-HEURISTIC FOR SCHEDULING SYSTEM SELF-PARAMETERIZATION	244
<i>Falcao, Diamantino ; Madureira, Ana ; Pereira, Ivo</i>	
EDUCATIONAL DATA MINING TO TRACK STUDENTS PERFORMANCE ON TEACHING LEARNING ENVIRONMENT LABSQL	251
<i>Figueira, Azauri S. ; Lino, Amanda S. ; Paulo, S.S. ; Santos, Clayton A.M. ; Brasileiro, Tania S.A. ; Del Pino Lino, Adriano</i>	
BUSINESS MARKETING ON SOCIAL NETWORKS: STUDY OF THE PERSPECTIVE OF PORTUGUESE USERS	257
<i>Almeida, Carla S.T. ; Alturas, Braulio</i>	
CRIMINAL DATA MINING: A CASE STUDY IN CRIMINAL OBSERVATORY TAPAJÓS	263
<i>de Melo, Bruno M. ; Guimaraes, Jarsen L.C. ; de Castro, Adriangela S. ; Santos, Clayton A.M. ; Nascimento, Durbens M. ; Del Pino Lino, Adriano</i>	
LOW COST STORAGE DEVICES WITH INTERFACES FOR EDUCATIONAL APPLICATIONS	269
<i>dos Santos Figueira, Azauri ; da Silva, Eneias Monteiro ; de Sousa, Ednelson Luis ; de Almeida, Doriedson Alves ; da Silva, Bruno Almeida ; da Silva Oliveira, Wallace</i>	
MÉTODO PARA SELECCIONAR SOFTWARE DE GESTIÓN DE CAMBIOS Y GESTIÓN DE INCIDENCIAS DE ITIL	274
<i>Bayona, Sussy ; Evangelista, J. ; Uquiche, D.</i>	
DATA WAREHOUSES IN MONGODB VS SQL SERVER: A COMPARATIVE ANALYSIS OF THE QUERIE PERFORMANCE	280
<i>Pereira, Daniel ; Oliveira, Paulo ; Rodrigues, Fatima</i>	
THE SET COVERING PROBLEM SOLVED BY THE BINARY TEACHING-LEARNING-BASED OPTIMIZATION ALGORITHM	287
<i>Crawford, Broderick ; Soto, Ricardo ; Leiva, Felipe Aballay ; Johnson, Franklin ; Paredes, Fernando</i>	
AN AGILE STRATEGY FOR IMPLEMENTING CMMI PROJECT MANAGEMENT PRACTICES IN SOFTWARE ORGANIZATIONS	291
<i>Soares, Felipe Santana Furtado ; de Lemos Meira, Silvio Romero</i>	
DOMOTICS CONTROL SYSTEM ARCHITECTURE	295
<i>Monteiro, Pedro ; Tome, Paulo ; Albuquerque, Daniel</i>	
A SERIOUS GAME TO PREVENT BULLYING AND PROMOTE EMPATHY	301
<i>Raminhos, Catia ; Claudio, Ana Paula ; Beatriz Carmo, Maria ; Carvalhosa, Susana ; de Jesus Candeias, Maria ; Gaspar, Augusta</i>	
DISIM: ONTOLOGY-DRIVEN SIMULATION OF BIOMEDICAL DATA INTEGRATION TASKS	307
<i>Sernadela, Pedro ; Pereira, Artur ; Rossetti, Rosaldo</i>	
KNOWLEDGE EXTRACTION FROM USAGE DATA OF MOBILE DEVICES WITH EDUCATIONAL PURPOSES	311
<i>de Arriba Perez, Francisco ; Rodriguez, Manuel Caeiro ; Gago, Juan Manuel Santos</i>	
ACCESSING MOVIES' EMOTIONAL INFORMATION	315
<i>Oliveira, Eva ; Ribeiro, Nuno ; Chambel, Teresa</i>	
EFFECTIVENESS OF THE COLLECTIVE ONLINE SHOPPING SYSTEM IN THE PERSPECTIVE OF THE BUSINESS PARTNERS: EXPLORATORY STUDY IN PORTUGAL	323
<i>Colaco, Filipa ; Laureano, Raul M.S. ; Ferreira, Pedro ; Laureano, Luis M.S.</i>	
GAMES AND INNOVATIVE TEACHING METHODS: GAIN TIME IN PORTUGAL	329
<i>Peres, Paula ; Mesquita, Anabela</i>	
CONTRIBUTIONS TO THE DEVELOPMENT OF TELEMATIC SERVICES FOR A INTELLIGENT ANALYSIS OF TRACES: A PROPOSAL FOR A PHD	335
<i>Merino, Mateo Ramos ; Gago, Juan Manuel Santos ; Sabucedo, Luis Alvarez</i>	
ON THE ROBUSTNESS OF SNPS FILTERING USING COMPUTATIONAL INTELLIGENCE	339
<i>Zonovelli, Bruno ; Borges, Carlos Cristiano Hasenclever ; Arbex, Wagner</i>	
ARCHITECTURE OF A PROCESS CONTROL AND PRODUCT TRACEABILITY SYSTEM	345
<i>Roris, Victor M.Alonso ; Gago, Juan M.Santos ; Sabucedo, Luis Alvarez ; Merino, Mateo Ramos</i>	
METADATA IMPLEMENTATION AS ONTOLOGY: STRUCTURE OF ENTERPRISE INTELLIGENCE	351
<i>Guimaraes, Francisco Santana ; Caldeira, Carlos Pampulim ; Quaresma, Paulo</i>	
WEB ACCESSIBILITY: STUDY OF MATURITY LEVEL OF PORTUGUESE INSTITUTIONS OF HIGHER EDUCATION	356
<i>da Silva, Paulo ; Alturas, Braulio</i>	
A CUSTOM INTERNET OF THINGS HEALTHCARE SYSTEM	362
<i>Maksimovic, Mirjana ; Vujovic, Vladimir ; Perisic, Branko</i>	
MULTIMEDIA SYSTEM FOR CHILDREN WITH HEARING DISABILITY	368
<i>Heredia, Diego Leonardo ; Cota, Manuel Perez</i>	

10 YEARS TOOLS WEB X.0 IN PORTUGAL: IN TEACHING AND LEARNING	373
<i>Peixoto, Nuno Miguel Cardoso ; Sobral, Sonia Rolland</i>	
EVALUATION OF THE ADOPTION OF AN INFORMATION SYSTEMS SECURITY POLICY	379
<i>Lopes, Isabel Maria ; Oliveira, Pedro</i>	
TOWARDS A HYBRID NLG SYSTEM FOR DATA2TEXT IN PORTUGUESE	385
<i>Pereira, Jose Casimiro ; Teixeira, Antonio ; Pinto, Joaquim Sousa</i>	
MODEL FOR MEASURING USABILITY OF SURVEY MOBILE APPS, BY ANALYSIS OF USABILITY EVALUATION METHODS AND ATTRIBUTES	391
<i>Molano, Jose Ignacio Rodriguez ; Yara, Eimi Sierra ; Garcia, Laura Katalina Jaramillo</i>	
PERFORMANCE ANALYSIS OF AN ACCESS SCHEME BASED ON EXHAUSTIVE POLLING FOR WBAN	397
<i>Gomes, Manoel Pontes ; Motoyama, Shusaburo</i>	
AN AUTOMATION FRAMEWORK FOR PACS WORKFLOWS OPTIMIZATION IN SHARED ENVIRONMENTS	404
<i>Godinho, Tiago Marques ; Silva, Luis Marques ; Costa, Carlos</i>	
SENIOR AND LEARNING OF ICT: A POTENTIAL CONTRIBUTION TO E-INCLUSION AND FOR YOUR WELL-BEING	410
<i>Pascoa, Gina ; Gil, Henrique</i>	
DIFFUSION AND DISTRIBUTION OF TOURISTIC ROUTES: WEB PLATFORM'S ARCHITECTURE ON TOURISM CONTEXT	416
<i>Chambel, Hugo Miguel Pereira ; de Jesus Pereira, Antonio Manuel</i>	
AUTOMATIC QUALITY EVALUATION OF MACHINE-TRANSLATED OUTPUT IN SOCIOLOGICAL-PHILOSOPHICAL-SPIRITUAL DOMAIN	422
<i>Seljan, Sanja ; Dunder, Ivan</i>	
OFFROAD TRACKS: A WEB MAPPING APPLICATION PROPOSAL FOR TRACK SHARING AND QUERY	426
<i>Goulart, Luis ; Goncalves, Pedro ; Rodrigues, Mario</i>	
AVAILABILITY AND SENSITIVITY ANALYSIS IN VIDEO STREAMING SERVICES HOSTED ON PRIVATE CLOUDS	430
<i>Melof, Rosangela ; Maciel, Paulo ; Bezerra, Maria Clara ; Dantas, Jamilson ; Matos, Rubens ; de Melo Filho, Ivanildo J. ; Denilson de Oliveira Feliciano, Fabio ; Carvalho, Rosangela Saraiva</i>	
USING PARAMETERIZED CALCULUS QUESTIONS FOR LEARNING AND ASSESSMENT	435
<i>Descalco, L. ; Carvalho, Paula</i>	
A DIFFERENTIAL EVOLUTION-BASED ALGORITHM FOR CALCULATING BEAMFORMERS IN MIMO SYSTEMS	440
<i>Jimenez, Samantha P. ; Maciel, Fermin M. ; Soriano-Equigua, Leonel ; Castillo, Victor H. ; Alvarez, Jose Luis</i>	
DESIGN OF A SMART PARKING SYSTEM USING WIRELESS SENSOR NETWORK	445
<i>Quinones, Manuel ; Gonzalez, Victor ; Quinones, Luis ; Valdivieso, Carlos ; Yaguana, Willian</i>	
EUROPEAN PORTUGUESE VALIDATION OF THE POST-STUDY SYSTEM USABILITY QUESTIONNAIRE (PSSUQ)	451
<i>Rosa, Ana Filipa ; Martins, Ana Isabel ; Costa, Victor ; Queiros, Alexandra ; Silva, Anabela ; Rocha, Nelson Pacheco</i>	
INTELLIGENT SYSTEM (HCI) FOR PEOPLE WITH MOTOR MISABILITIES	456
<i>Lancheros-Cuesta, Diana Janeth ; Marin, Maick Peter ; Saenz, Yovanny Vela</i>	
SENSE OF PRESENCE INSIDE A FEARED (VIRTUAL) TUNNEL	461
<i>Claudio, Ana Paula ; Beatriz Carmo, Maria ; Gomes, Ines Laureano ; Esteves, Francisco ; Gaspar, Augusta</i>	
ELGG SOCIAL NETWORK SOFTWARE READJUSTMENT TO MATHEMATICS EDUCATION: A STUDY CASE	468
<i>Sarasty, Mario Fernando Solarte ; Fernandez, Marlon Felipe Burbano</i>	
ASSISTED SEARCHES FOR OPEN DATA PORTALS	474
<i>Lozano-Tello, Adolfo ; Acedo, Julio ; Redondo, Jesus ; Prieto, Alvaro</i>	
SOFTWARE DOCUMENTATION QUALITY: A CASE STUDY FOR THE SOFTWARE DOCUMENTATION OF SIGEPE	481
<i>da Silva, Waldeyr Mendes C. ; de Sousa, Rafael ; da Mata, Daniel Q. ; Araujo, Aleteia P.F. ; Holanda, Maristela ; Dias dos Santos, Gileno</i>	
PHYSICAL ACCESS CONTROL: A CASE STUDY IN A MILITARY INSTITUTION OF THE BRAZIL	487
<i>do Nascimento, Leandro Miranda ; de Araujo, Aleteia Patricia Favacho ; von Paumgarten, Paulo Franklin</i>	
DEVELOPMENT OF A MONITORING SYSTEM FOR EVALUATION OF THE MENTAL HEALTH PROGRAM IN THE CITY OF SANTARÉM, STATE OF PARÁ, BRAZIL	493
<i>Macedo, Ana Emilia Gomes ; Baltatu, Ovidiu Constantin ; da Silva, Bruno Almeida</i>	

NEW PARADIGM IN COMMUNICATION — THE SOCIAL NETWORKS BETWEEN BRANDS AND CONSUMERS	499
<i>Alves, Graca ; Antunes, Joaquim</i>	
USE OF INFORMATION TECHNOLOGY ON STATUTORY AUDITORS' WORK: NEW PROFILES BEYOND SPREADSHEETS' USERS	504
<i>Pedrosa, Isabel ; Costa, Carlos J. ; Laureano, Raul M.S.</i>	
FRAMEGEOSOCIAL MOBILE AD-HOC SOCIAL NETWORK BASED ON GEOLOCATION.....	510
<i>Ramos, Thales M. ; Damasceno, Mateus B. ; Holanda, Breno R.Moura Maristela ; Araujo, Aleteia</i>	
SOLID DOSING SYSTEM FOR FEEDING DOGS WITH REMOTE COMMUNICATION MODULE	515
<i>Lancheros-Cuesta, Diana Janeth ; Suarez, David Rolando ; Gordo, Luis Hernandez-Carlos</i>	
TOWARDS A FRAMEWORK THAT PROMOTES INTEGRATION BETWEEN THE UX DESIGN AND SCRUM, ALIGNED TO CMMI.....	520
<i>Peres, Angela Lima ; Meira, Silvio Lemos</i>	
TECHNICAL AND PEDAGOGICAL USABILITY IN A VIRTUAL LEARNING ENVIRONMENT: A CASE STUDY AT THE FEDERAL INSTITUTE OF RIO GRANDE DO NORTE — BRAZIL	524
<i>de Pinho, Andre Luis Santos ; de Sales, Francisco Monteiro ; Rosa, Jose Guilherme Santa ; Ramos, Maria Altina Silva</i>	
THE IMPACT OF DATA ACCURACY ON USER-PERCEIVED BUSINESS SERVICE'S QUALITY	528
<i>Belhiah, Meryam ; Bounabat, Bouchaib ; Achchab, Said</i>	
ITC IMPACTS IN THE HEALTH SECTOR: PACS ADOPTION IN CENTRO HOSPITALAR DO MÉDIO AVE.....	532
<i>Diniz, Rui Pedro Henrique ; Nascimento, Jose Carlos</i>	
TECHNICAL AND PEDAGOGICAL USABILITY IN E-LEARNIG: PERCEPTIONS OF STUDENTS FROM THE FEDERAL INSTITUTE OF RIO GRANDE DO NORTE (BRAZIL) IN VIRTUAL LEARNING ENVIRONMENT	538
<i>de Sales, Francisco Monteiro ; Ramos, Maria Altina Silva</i>	
USING CASE-BASED REASONING INTO A DECISION SUPPORT METHODOLOGY FOR THE INCIDENT RESOLUTION CONTROL IN IT	542
<i>Dias Freire de Mello, Thiago ; Lopes, Expedito Carlos</i>	
USER MODELLING IN SCHEDULING SYSTEM WITH ARTIFICIAL NEURAL NETWORKS	548
<i>Cunha, Bruno ; Madureira, Ana ; Pereira, Joao Paulo</i>	
SYSTEM BASED ON MACHINE VISION FOR TRANSLATION OF FINGERSPELLING ALPHABET TO LATIN ALPHABET	554
<i>Lancheros-Cuesta, Diana ; Schlenker, Chiara Seidel ; Morales, Luis Fernando</i>	
CONTINUOUS INTEGRATION USING CLOUD COMPUTING	559
<i>Vigario, Joana Coelho ; Teixeira, Claudio ; Pinto, Joaquim Sousa</i>	
USABILIDADE PEDAGÓGICA: UM FATOR DETERMINANTE NA ADOÇÃO DO E-LEARNING NO ENSINO SUPERIOR	566
<i>Batista, Sofia ; Pedro, Neuza</i>	
FLEXIBLE, MODULAR, STANDARD, FREE AND AFFORDABLE MODEL FOR CPS CONTROL APPLIED TO MOBILE ROBOTICS.....	570
<i>Gonzalez-Nalda, Pablo ; Etxeberria-Agiriano, Ismael ; Calvo, Isidro</i>	
SERVICE ELICITATION OF NON-FUNCTIONAL REQUIREMENTS: AN APPROACH USING ACTIVITY THEORY	576
<i>Goncalves, Antonio ; Correia, Anacleto ; Fernandes, Joao</i>	
THE INTEGRATION OF RADIOLOGY INFORMATION SYSEMS.....	583
<i>Mineiro, Luis ; Tome, Paulo</i>	
SUPPORT ARCHITECTURE TO DESMATERIALIZATION OF BANKING OPERATIONS.....	589
<i>Silva, Joana ; Teixeira, Claudio ; Pinto, Joaquim Sousa</i>	
FRAMEWORK FOR ASSESSING THE QUALITY OF SITES OPEN COURSE WARE (OCW) BY QUALITY ATTRIBUTES.....	595
<i>Rodriguez, Germania ; Cueva, Samanta ; Sucunuta, Manuel ; Marban, Oscar</i>	
A METHODOLOGY FOR PLAYFUL LEARNING APPLICATION DEVELOPMENT.....	602
<i>Silva, J.C. ; Rodrigues, F.G. ; Silva, J.L.</i>	
DECISION SUPPORT SYSTEM FOR FOREST FIRES FIREFIGHTING IN AGUEDA MUNICIPALITY.....	608
<i>Calvao, Ana Rita ; Carvalho, Filipe ; Marques, Fabio</i>	
INCIDENCE OF SOFTWARE QUALITY ATTRIBUTES IN THE DESIGN, CONSTRUCTION AND DEPLOYMENT OF CLOUD ARCHITECTURAL ENVIRONMENTS.....	613
<i>Cabrera, S.Armando ; Abad, E.Marco ; Danilo Jaramillo, H. ; Poma, G.Ana ; Verdum, Jose Carrillo</i>	

THE USE OF THE METHODOLOGY EXTREME PROGRAM AND RUP TO THE DEVELOPMENT OF HOME AUTOMATION EXPERIMENTS	620
<i>Sievers, Fretz ; Pires, Alexandre Lisboa ; Brusius, David Coelho</i>	
ONTOLOGY RESEARCH TASK FOR USE OF INTELLIGENT AGENTS.....	627
<i>Britto, Roberta Gondim ; Lopes, Expedito Carlos</i>	
SOFTWARE ENGINEERING'S IMPLEMENTATION IN A VIRTUAL WORLD'S SOFTWARE FOR EDUCATION	634
<i>Maldonado, Calixto ; Groppo, Mario ; Perez Cota, Manuel</i>	
FACEBOOK VS MOODLE: SURVEYING UNIVERSITY STUDENTS ON THE USE OF LEARNING MANAGEMENT SYSTEMS TO SUPPORT LEARNING ACTIVITIES OUTSIDE THE CLASSROOM.....	639
<i>Gomes, Luis Mendes ; Guerra, Helia ; Mendes, Armando ; Rego, Isabel Estrela</i>	
SCALABLE INFORMATION SYSTEM USING EVENT ORIENTED PROGRAMMING AND NOSQL.....	643
<i>Santana, Vagner Jose ; de Souza, Gabriel Spadon ; Correia, Ronaldo Celso Messias ; Garcia, Rogerio Eduardo ; Eler, Danilo Medeiros ; Olivete, Celso</i>	
SIMULATION AND ANALYSIS APPLIED ON VIRTUALIZATION TO BUILD HADOOP CLUSTERS.....	649
<i>de Souza, Gabriel Spadon ; Correia, Ronaldo Celso Messias ; Garcia, Rogerio Eduardo ; Olivete, Celso</i>	
THE TEACHING JOB: THE BLACKBOARD AND CHALK ON SOCIAL NETWORKS	656
<i>Mussoi, Eunice Maria ; Falkembach, Gilse A.Morgental ; Flores, Maria Lucia Pozzatti</i>	
PUBLISHING AND ACCESSING CONTENTS ON A VIRTUAL LEARNING ENVIRONMENT OF A HIGHER EDUCATION INSTITUTION	662
<i>Alves, Paulo ; Miranda, Luisa ; Morais, Carlos</i>	
EMOTION & STRESS MAPPING: ASSEMBLING AN AMBIENT GEOGRAPHIC INFORMATION-BASED METHODOLOGY IN ORDER TO UNDERSTAND SMART CITIES.....	668
<i>de Oliveira, Tiago H.Moreira ; Painho, Marco</i>	
E-COMMERCE AS AN ENTRY MODE IN FOREIGN MARKETS: A SYSTEMIC APPROACH TO THE ASSESSMENT OF OPPORTUNITIES	672
<i>de Andrade, Antonio Manuel Valente ; Costa e Silva, Susana ; Rebeca, Goncalo Pereira</i>	
IMPLEMENTATION OF A GIS PLATFORM TO PROMOTE THE BIKE REGIONAL ECONOMIC VALUE	679
<i>Soares, Tiago ; Martins, Ciro ; Mota, Jose Carlos ; Goncalves, Luis Jorge</i>	
MEASUREMENT MODEL OF KNOWLEDGE MANAGEMENT IN PRODUCTIVE CHAINS	684
<i>Garcia, Victor Hugo Medina ; Gonzalez, Jair Eduardo Rocha</i>	
A GAMIFIED APPLICATION FOR ASSESSMENT OF BALANCE AND FALL PREVENTION	690
<i>Vieira, Bruno ; Pereira, Luis ; Freitas, Ricardo ; Terroso, Miguel ; Simoes, Ricardo</i>	
IMPLEMENTATION OF PROTOTYPE OF NATURAL LANGUAGE INTERFACE TO DATABASE	696
<i>del Rio, Martin Munoz ; Castillo, S.Jose Luis</i>	
AN INFORMATION SYSTEM FOR THE CUTTING STOCK PROBLEM WITH OPTIMIZATION OF RETAIL MATERIALS IN STOCK	701
<i>Mendes, Jaime ; Fernandes, Pedro ; Pereira, Carla Sofia</i>	
EFFECTIVENESS OF EDUCATIONAL PRACTICES THROUGH THE EXTENSION OF A FRAMEWORK UBIQUITOUS LEARNING ENVIRONMENT	707
<i>Brito, Josilene Almeida ; Amorim, Ricardo ; Gomes, Alex Sandro</i>	
CLASSIFICATION OF WATER FOR PRODUCTION USING PARAMETERS IN REAL TIME	712
<i>Marino, Jorge Tomas Camejo ; Pacheco, Osvaldo Rocha ; Lopez, Miguel Angel Guevara</i>	
TRENDING TOPICS IN TWITTER: A CASE STUDY.....	717
<i>Martins, Tiago ; Azevedo, Isabel</i>	
USES OF SOCIAL MEDIA FACEBOOK & TWITTER BY ECUADORIAN RADIO: MANAGEMENT IN MOST IMPORTANT SOCIAL NETWORK IN ECUADORIAN RADIOS IN A CONVERGENCE TIME	723
<i>Yaguana, Hernan Antonio ; Vazquez, Julia Martinez ; Gonzalez, Maria Jose</i>	
NATIONAL PATIENT REGISTRY WITH HEMOPHILIA AND OTHER CONGENITAL COAGULOPATHIES: THE PORTUGUESE SYSTEM.....	730
<i>Teixeira, Leonor ; Ferreira, Carlos ; Saavedra, Vasco ; Simoes, Joao Pedro ; Santos, Beatriz Sousa</i>	
A DEVELOPEMNT MODEL OF UNITS OF LEARNING FOR MULTIPLE PLATFORMS.....	736
<i>de Oliveira, Francisco Kelsen ; Gomes, Alex Sandro</i>	
THE EVOLUTION OF HEALTH CARE IN PORTUGAL	739
<i>dos Santos Magalhaes, Anibal Rui ; Faria, Brigida Monica</i>	

TIME/SPACE BASED BIOMETRIC HANDWRITTEN SIGNATURE VERIFICATION	743
<i>Goncalves, Ricardo P. ; Augusto, Alexandre B. ; Correia, Manuel E.</i>	
PERFORMANCE AND SCALABILITY OF VOLDEMORT NOSQL	749
<i>Neves, Ricardo ; Bernardino, Jorge</i>	
FUZZY MODEL TAKAGI SUGENO WITH STRUCTURED EVOLUTION FOR DETERMINING CONSUMER CREDIT SCORE	755
<i>Perez, Hector Alejandro Patino ; Palacio, Juan Alejandro Pena ; Lochmuller, Christian</i>	
TRANSPARENCY IN THE NATIONAL ASSEMBLIES OF PORTUGUESE SPEAKING AFRICAN COUNTRIES: ADAPTING THE BUNGENI PARLIAMENTARY SYSTEM — THE CASE STUDY OF SAO TOME AND PRINCIPE	761
<i>Bento, Pedro M.Sousa ; Zagalo, Helder ; Teixeira, Claudio ; Pinto, Joaquim Sousa</i>	
INTELLIGENT SYSTEM FOR RECYCLING INCENTIVE	766
<i>Reis, Pedro ; Pitarma, Rui ; Caetano, Filipe ; Goncalves, Celestino</i>	
CONCEPTUALISATION AND DEVELOPMENT OF A COLLECTIVE SPATIAL DECISION SUPPORT SYSTEM: THE GEOSPATIAL SYSTEM OF COLLECTIVE INTELLIGENCE	771
<i>Daniel Castillo Rosas, Juan ; Velez, Alex Jimenez ; Fierro, Josep Maria Monguet ; Andres, Maria Amparo Nunez</i>	
SYSTEMIC ARCHETYPES USE TO DEVELOPING AN INTERACTIVE SOFTWARE: A CHILDREN WITH MODERATED AUTISM CASE	775
<i>Aristizabal, Miguel ; Echeverri, Jaime ; Aristizabal, Manuela ; Aristizabal, Carolina ; Gomez, Z.Santiago ; Gomez, G.Santiago</i>	
SOCIAL NETWORKS SITES ADOPTION FOR EDUCATION: A GLOBAL PERSPECTIVE ON THE PHENOMENON THROUGH A LITERATURE REVIEW	781
<i>Martins, Jose ; Goncalves, Ramiro ; Branco, Frederico ; Peixoto, Carlos</i>	
ETHICS AND FRAUD IN E-BANKING SERVICES	788
<i>Abreu, Rute ; David, Fatima ; Legcevic, Mena ; Segura, Liliane ; Formigoni, Henrique ; Mantovani, Flavio</i>	
A DECISION SUPPORT PLATFORM FOR IT INFRASTRUCTURE MANAGEMENT: THE UNIVERSITY OF TRÁS-OS-MONTES E ALTO DOURO SERVICES OF INFORMATION AND COMMUNICATIONS CASE STUDY	794
<i>Branco, Frederico ; Martins, Jose ; Goncalves, Ramiro ; Bessa, Jose ; Costa, Antonio</i>	
MEASUREMENT OF MATERIALS EMISSIVITY SUPPORTED BY IMAGE SOFTWARE	801
<i>Pitarma, Rui ; Crisostomo, Joao ; Jorge, Luis</i>	
SOFTWARE DEVELOPMENT FOR MEDICATION ADMINISTRATION RECORD IN CLINICS AND SMALL NURSING HOMES — A CASE STUDY	806
<i>Matias, Bruno Miguel ; Metrolho, Jose Carlos ; Ribeiro, Fernando Reinaldo</i>	
INFORMATION SYSTEM FOR THE MANAGEMENT AND VISUALIZATION OF MULTISENSORIAL CONTENTS	812
<i>Freitas, Jorge ; Meira, Cesar ; Melo, Miguel ; Barbosa, Luis ; Bessa, Maximino</i>	
THE ELECTRONIC BOOKLET IN THE SCHOOL-FAMILY RELATIONSHIP: PERCEPTIONS OF TEACHERS AND GUARDIANS	818
<i>Abreu, Antonio ; Rocha, Alvaro</i>	
PEER-REVIEW IN ARCHITECTURE EDUCATION: APPLICATION IN GEOGRAPHIC INFORMATION SYSTEMS LEARNING	828
<i>Garcia-Almirall, Pilar ; Redondo, Ernest ; Valls, Francesc ; Fonseca, David</i>	
MR-TRACTOGRAPHY IN THE EVALUATION OF THE REHABILITATION PROCESS IN STROKE PATIENTS	835
<i>Lugokenski, Ricardo ; Pasqualotti, Adriano ; Lucatelli, Veronica ; de Castro Welter, Lara ; Biancini, Rafael</i>	
GAMES AS A REHABILITATION PERSPECTIVE OF STROKE PATIENTS	841
<i>Lucatelli, Veronica ; Pasqualotti, Adriano ; Lugokenski, Ricardo ; Forcelini, Cassiano Mateus ; de Castro Welter, Lara ; da Silva, Paula Amanda ; da Silva Brugnera, Natania</i>	
SECURITY BY DESIGN FACTORS FOR DEVELOPING AND EVALUATING SECURE SOFTWARE	846
<i>de la Camara, Mercedes ; Saenz, Fco.Javier ; Calvo-Manzano, Jose Antonio ; Arcilla, Magdalena</i>	
SERIOUS GAMES FOR COGNITIVE REHABILITATION: FORMS OF INTERACTION AND SOCIAL DIMENSION	852
<i>Rocha, Rui ; Reis, Luis Paulo ; Rego, Paula Alexandra ; Moreira, Pedro Miguel</i>	
SERVICES ESTABLISHMENT IN THE COMPUTER SECURITY INCIDENT RESPONSE TEAMS: A REVIEW OF STATE OF ART	858
<i>Jezreel, Mejia ; Mirna, Munoz ; Edgar, Uribe</i>	
INTRODUCING THE PROCESS IMPROVEMENT IN HIGHER EDUCATION INSTITUTIONS	864
<i>Munoz, Mirna ; Mejia, Jezreel ; Garcia, Josefina ; Minero, J.Jesus</i>	

DEFINING REQUIREMENTS FOR AN ATRIAL FIBRILLATION SCREENING SYSTEM THAT IMPLEMENTS TELE-HOLTERING ON A CLOUDIFIED INFRASTRUCTURE	871
<i>Veiga, Cesar ; Paredes-Galan, Emilio ; Rivera, Daniel ; Calvo, Francisco ; Pazos, Pablo ; Pena, Carlos ; Garcia, Enrique ; Romo, Andres Iniguez</i>	
PLATAFORMS FOR DIGITAL HERITAGE MANAGEMENT	877
<i>de Oliveira, Jaime ; Reis, Luis Paulo ; Amaral, Luis</i>	
PRELIMINARY DIMENSIONS FOR A QUALITY MODEL OF ELECTRONIC LOCAL GOVERNMENT SERVICES	883
<i>Sa, Filipe ; Rocha, Alvaro ; Cota, Manuel Perez</i>	
DEVELOPMENT AND EVALUATION OF CLOUDS4ALL INTERFACE: A TAG CLOUDS READER FOR VISUALLY IMPAIRED USERS	893
<i>Oliveira, Rita ; Silva, Telmo ; de Abreu, Jorge Ferraz</i>	
PROPOSAL OF A MODEL FOR IT SERVICE CONTINUITY MANAGEMENT	899
<i>Ueno, Wagner Hiroshi ; de Souza Goes, Anderson ; de Barros, Rodolfo Miranda</i>	
INTERNET SAFE IN THE 1ST CYCLE OF BASIC EDUCATION: THE INTERNET AS AN EDUCATIONAL RESOURCE IN SUPERVISED TEACHING PRACTICE	905
<i>Gil, Henrique ; Felix, Carina</i>	
ANALYSING KNOWLEDGE CONSTRUCTION IN ASYNCHRONOUS ONLINE DISCUSSIONS	911
<i>Lucas, Margarida ; Moreira, Antonio</i>	
ENUMERATION STRATEGIES TO SOLVE CONSTRAINT SATISFACTION PROBLEMS: PERFORMANCE EVALUATION	917
<i>Soto, Ricardo ; Crawford, Broderick ; Olivares, Rodrigo ; Herrera, Rodrigo ; Johnson, Franklin ; Paredes, Fernando</i>	
TOOL TO EVALUATE THE DEGREE OF MATURITY LESSONS LEARNED MANAGEMENT IN A SOFTWARE DEVELOPMENT PROCESS	923
<i>de Souza Goes, Anderson ; de Barros, Rodolfo Miranda</i>	
BUILDING INFORMATION MODELLING (BIM) TAUGHT IN A CIVIL ENGINEER SCHOOL	929
<i>Sampaio, Alcinia Zita</i>	
MAINTENANCE OF BUILDING COMPONENTS SUPPORTED IN INTERACTIVE ENVIRONMENTS	935
<i>Sampaio, Alcinia Zita ; Gomes, Augusto M.</i>	
TOWARDS A SUBSTANTIVE THEORY OF PROJECT DECISIONS IN SOFTWARE DEVELOPMENT PROJECT-BASED ORGANIZATIONS: A CROSS-CASE ANALYSIS OF IT ORGANIZATIONS FROM BRAZIL AND PORTUGAL	941
<i>da Cunha, Jose Adson Oliveira Guedes ; de Moura, Hermano Perrelli</i>	
THE SUCCESS OF IS/IT PROJECTS IN THE HEALTHCARE SECTOR: STAKEHOLDERS' PERCEPTIONS	947
<i>Gomes, Jorge ; Romao, Mario</i>	
INSTRUCTIONAL PREFERENCES ON E-LEARNING COURSE OF SCHOOL SECRETARY ACCORDING TO THE VIRTUAL TUTORS	954
<i>Luz, Bruno N. ; Areao, Andreza S. ; Luz, Rafael N. ; Santos, Rafael ; Guimaraes, Marcelo de P. ; Martins, Valeria F.</i>	
THE MANAGEMENT OF SOCIAL NETWORKS IN THE NEWS ON NATIONAL TV IN ECUADOR	961
<i>Renteria, Veronica Elizabeth Gonzalez ; Vallejo, Geovanna Elizabeth Salazar ; Leon, Carlos Ortiz ; Suing, Abel</i>	
PROPOSAL OF A MODEL FOR SCIENTIFIC PAPERS WORKSHOPS CREATION: THE CASE OF THE GESTÃO EM TECNOLOGIA DA INFORMAÇÃO (GTI) GROUP — UNIVERSIDADE TECNOLÓGICA FEDERAL DO PARANÁ CAMPUS CORNÉLIO PROCÓPIO	967
<i>Fabri, Jose Augusto ; L'Erario, Alexandre ; Palacios, Rodrigo H.C.</i>	
WHEN THE PAIR PROGRAMMING SHOULD BE ADOPTED IN A BUSINESS ENVIRONMENT	973
<i>Fabri, Jose Augusto ; L'Erario, Alexandre</i>	
TEACHING PROGRAMMING FOR HIGH SCHOOL STUDENTS USING THE LEGO MINDSTORMS ROBOT	979
<i>Barreto, Valeria Banachi ; L'Erario, Alexandre ; Fabri, Jose Augusto</i>	
OPEN EDUCATIONAL RESOURCES TO SUPPORT MUSICAL EDUCATION	986
<i>Nunes, Samara Soares ; Martins, Valeria Farinazzo ; Dionisio Correa, Ana Grasielle</i>	
USING THE RECOGNITION AND SPEECH SYNTHESIS TO ASSIST THE PRACTICE OF ENGLISH PRONUNCIATION	992
<i>Martins, Valeria Farinazzo ; Lombardi, Eduardo ; da Silva, Luana Felix ; de Paiva Guimaraes, Marcelo</i>	
THE ROLE OF ORGANIZATIONAL CULTURE IN THE DYNAMIC RELATIONSHIP BETWEEN INFORMATION TECHNOLOGY AND ORGANIZATIONAL LEARNING	998
<i>Fernandes, Adriana L. ; Alturas, Braulio A.B. ; Laureano, Raul M.S.</i>	

SCHEDULING AND BATCHING IN MULTI-SITE FLEXIBLE FLOW SHOP ENVIRONMENTS	1003
<i>Santos, A.S. ; Madureira, A.M. ; Varela, M.L.R. ; Putnik, G.D. ; Kays, H.M.Emrul ; Karim, A.N.M.</i>	
AN INTEGER PROGRAMMING APPROACH FOR BALANCING AND SCHEDULING IN EXTENDED MANUFACTURING ENVIRONMENT	1009
<i>Kays, H.M.Emrul ; Karim, A.N.M. ; Varela, M.L.R. ; Santos, A.S. ; Madureira, A.M.</i>	
HEART SOUNDS COMPRESSION THROUGH WAVELET TRANSFORM CODING	1015
<i>Jaramillo, Katty Rohoden ; Gonzalez, Patricia Ludena</i>	
A NOVEL APPLICATION OF SYSTEM ON CHIP PLATFORMS OVER INDUSTRIAL SENSOR NETWORKS: A CASE OF UBIQUITOUS COMPUTING WITHIN A POWER GENERATION PLANT	1020
<i>Gonzalez, Mauricio ; Gonzalez, Liliana ; Echeverri, Jaime ; Gomez, Maria Clara ; Villa, Juan Carlos</i>	
GENERAL TERMS AND CONDITIONS IN THE ELECTRONIC CONTRACTING	1027
<i>Valenzuela, Esperanza Gomez</i>	
INTEGRATION-AS-A-SERVICE FOR BIOINFORMATICS	1032
<i>Lopes, Pedro ; Oliveira, Jose Luis</i>	
CHALLENGES AND OPPORTUNITIES FOR EXPLORING PATIENT-LEVEL DATA: PRELIMINARY RESULTS	1038
<i>Lopes, Pedro ; Bastiao, Luis ; Oliveira, Jose Luis</i>	
PRELIMINARY STUDY ON SYSTEMATIC LITERATURE REVIEW OF AUGMENTED AND VIRTUAL REALITY APPLIED TO MOTOR AND COGNITIVE DISABILITIES	1043
<i>Colpani, Rogerio ; Homem, Murillo Rodrigo Petrucelli</i>	
STEWART PLATFORMS: CONTRIBUTIONS TO THE LEARNING PROCESS IN PROBLEMS OF ORTHOPEDICS	1047
<i>Heverton, Maicon ; Teixeira, Marcelo M. ; Souza, Hugo V.L. ; de Farias, Ivaldir H. ; Barbosa, Onnezimo dos S. ; Guilherme, Hugo ; da Silva, B. ; dos Santos, Elilton Oliveira ; Farias, Gleybson ; Cruz, Jose Eduardo de L. ; da Silva, Nivaldo M. ; Menezes, William M.</i>	
PROFILE-ORIENTED ALGORITHMS TEACHING: A PROPOSED METHODOLOGY	1057
<i>Moreira, Fernando ; Ferreira, Maria Joao</i>	
ARCHITECTURE FOR CENTRALIZING HEALTHCARE SERVICES	1061
<i>Ferreira, Duarte ; Rocha, Tiago ; Brito, Antonio Carvalho</i>	
STRATEGIES FOR SPATIAL SKILLS DEVELOPMENT THROUGH THE IMPLEMENTATION OF ICT	1067
<i>Bravo, Leonardo Emiro Contreras ; Ortiz, Julian Alfosno Tristancho ; Tamayo, Luis Fernando Vargas</i>	
BINARY BAT ALGORITHMS FOR THE SET COVERING PROBLEM	1074
<i>Crawford, Broderick ; Soto, Ricardo ; Olea, Claudia ; Johnson, Franklin ; Paredes, Fernando</i>	
A MOBILE PUBLIC PARTICIPATION GEOGRAPHIC INFORMATION SYSTEM ARCHITECTURE FOR COLLECTING OPINIONS ABOUT PUBLIC SERVICES	1078
<i>Camargos, Breno ; Holanda, Maristela ; Araujo, Aleteia</i>	
MEANFUL EXPERIENCES FOR TRAINING IN INNOVATION OF SYSTEMS ENGINEERS: CASE UNIVERSITY OF MEDELLÍN	1084
<i>Gomez, Maria Clara ; Gonzalez, Liliana ; Echeverri, Jaime ; Gonzalez, Mauricio</i>	
EVALUATION OF UML MODELING TOOLS FOR CLINICAL PATHWAYS USED IN HEALTH INFORMATION SYSTEMS	1090
<i>Pahl, Christina ; Supriyanto, Eko ; Detschew, Vesselin</i>	
PLATFORM TO DEVELOP APPLICATIONS TO SUPPORT CARE PROVIDING	1096
<i>Carvalho, Sandro ; Pavao, Joao ; Costa, Victor ; Queiros, Alexandra ; Rocha, Nelson Pacheco</i>	
CRITICAL SUCCESS FACTORS FOR THE IMPLEMENTATION OF A SECURITY POLICY IN HEALTH CLINICS	1102
<i>Lopes, Isabel Maria</i>	
EVOLUTION OF OFFICIAL SOCIAL NETWORKS OF THE UNIVERSIDAD TECNICA PARTICULAR DE LOJA — ECUADOR	1109
<i>Hidalgo, Rosario Puertas ; Gutierrez, Isidro Marin ; Carpio, Lilia</i>	
FREE/OPEN SOURCE SOFTWARE VS. PROPRIETARY SOFTWARE IN EDUCATION	1115
<i>Mota, Carla ; Seruca, Isabel</i>	
A TAXONOMY FOR SOFTWARE TESTING PROJECTS	1121
<i>Villalon, Jose Calvo-Manzano ; Agustin, Gonzalo Cuevas ; Gilabert, Tomas San Feliu ; de Jesus Jimenez Puello, Jose</i>	
TOWARDS A KNOWLEDGE FEDERATION OF LINKED PATIENT REGISTRIES	1127
<i>Lopes, Pedro ; Sernadela, Pedro ; Oliveira, Jose Luis</i>	
LEARNING ASSESSMENT IN HIGHER EDUCATION: A METHODOLOGICAL APPROACH	1132
<i>Moreno, L. ; Gonzalez, C.S. ; Popescu, B. ; Groenwald, C.L.O.</i>	

ANIMATION AND AUTOMATIC EVALUATION IN SUPPORTING THE TEACHING OF PROGRAMMING	1138
<i>Tavares, Paula Correia ; Gomes, Elsa Ferreira ; Henriques, Pedro Rangel</i>	
THE TABLE TO TABLET (T2T) THERAPY SOFTWARE DEVELOPMENT APPROACH	1142
<i>Jesus, Luis M.T. ; Santos, Joaquim ; Martinez, Joana ; Lousada, Marisa ; Pape, Daniel</i>	
GREEN CODE: ENERGY EFFICIENCY IN THE SOURCE CODE FOR HIGH-PERFORMANCE COMPUTING	1146
<i>Corral-Garcia, Javier ; Gomez-Martin, Cesar ; Gonzalez-Sanchez, Jose-Luis</i>	
COMMUNICATIONS AND CORPORATE SOCIAL RESPONSIBILITY: A CANVAS TO BUILD ITS STRATEGY	1151
<i>Hurtado, J.Carlos H. ; Ferras, Xavier ; Arimany, Nuria ; Meijide, Dulcinea</i>	
A PROCESS TO MINING ISSUES OF SOFTWARE REPOSITORIES	1159
<i>Bautista, Ana Maria ; Feliu, Tomas San</i>	
USER BRAIN-DRIVEN EVALUATION OF AN EDUCATIONAL 3D VIRTUAL ENVIRONMENT	1165
<i>Carofiglio, Valeria ; Ricci, Giuseppe ; Abbattista, Fabio</i>	
ELECTRONIC HEALTH RECORD FOR CLINICAL INTERVENTION IN CHILDREN WITH LANGUAGE DISORDERS	1171
<i>Gomes, Diana ; Queiros, Alexandra ; Rocha, Nelson Pacheco</i>	
A METHODOLOGY FOR EVALUATION OF ENERGY CRITICAL INFRASTRUCTURES AGAINST CYBER ATTACKS	1178
<i>Leite, Sergio Ribeiro ; de Araujo, Aleteia Patricia Favacho ; von Paumgarten, Paulo Franklin</i>	
APPLICABILITY OF KNOWLEDGE MANAGEMENT PRACTICES AT SCIENTIFIC RESEARCH ENVIRONMENT	1184
<i>Bernardo Gomes Santos, Domingos ; Santos, Josemir Coelho</i>	
PROCEDURAL GENERATION OF TOPOLOGIC ROAD NETWORKS FOR DRIVING SIMULATION	1191
<i>Campos, Carlos ; Leitao, Joao Miguel ; Pereira, Joao Paulo ; Ribas, Antonio ; Coelho, Antonio Fernando</i>	
THE PEDAGOGY OF E-LEARNING PLATFORMS: PROSPECTS FOR SCIENCE TEACHING	1197
<i>Teixeira, Marcelo M. ; de Oliveira, Rapahel Franklin F. ; Summer, Henning ; Souza, Hugo V.L. ; Filho, Gilberto Cysneiros ; Paiva, Micaias ; Torres, Ivonaldo ; dos Santos, Walter F. ; de Santana, Demetrio A. ; Pazzoline, Hugo ; Silva, Josival dos S. ; de Lima, Joel A.</i>	
METHODOLOGY FOR BUSINESS PROCESS MODELING: A STUDY CASE WITHIN THE BRAZILIAN MINISTRY OF PLANNING, BUDGET AND MANAGEMENT	1204
<i>de Sousa, Rafael T. ; de Deus, Flavio E.G. ; de Sousa, Bruno A. ; Villapouca, Nelson G. ; Holanda, Maristela T. ; Araujo, Aleteia P.F. ; Freitas, Henrique ; Cortes, Fabiano ; Santos, Renan ; de Moraes, Altino J.Mentzingen</i>	
IMPLEMENTING INTEROPERABILITY IN A BRAZILIAN SEISMIC EVENT DATABASE	1210
<i>Pinheiro, Alexandre ; de Sousa, Rafael Timoteo ; Silva, Gyllycymar ; Chabrawi, Noha ; Holanda, Maristela ; Araujo, Aleteia ; Araujo, George Sand L.</i>	
POTENTIAL AND DYNAMIC VALUE MEASURING	1216
<i>Aristizabal, Miguel ; Urrego, German ; Aristizabal, Manuela ; Aristizabal, Carolina</i>	
APPLIED SCIENTIFIC COMPUTING OVER THE WEB WITH REMOTE SERVERS: SAMPLING WITH AND WITHOUT REPLACEMENT	1222
<i>Cunha, Marco ; Casquilho, Miguel</i>	
MODEL TO RETURN ON INVESTMENT AFTER THE SOFTWARE DEPLOYMENT	1228
<i>Paduam, Taisa Cordeiro ; Fabri, Jose Augusto ; L'Erario, Alexandre</i>	
ASSESSMENT OF WORLDVIEW-2 SATELLITE-IMAGE FUSION USING DAUBECHIES WAVELET TRANSFORM	1233
<i>Daza, Ruben Javer Medina ; Cardona, Erika Sofia Upegui</i>	
RNA-SEQ UD: A BIOINFORMATICS PLATTFORM FOR RNA-SEQ ANALYSIS	1239
<i>Ramirez, Miguel ; Rojas-Quintero, Cristian Alejandro ; Vera-Parra, Nelson Enrique</i>	
TV POLITICS SHOWED IN TWITTER: MEDIA AND FOLLOWERS	1244
<i>Enguix-Oliver, Salvador ; Gallardo-Pauls, Beatriz</i>	
THE SMARTPHONES: REVOLUTIONIZING JOURNALISM	1248
<i>de las Heras, Eva Lavin ; Rodriguez, Alba Silva</i>	
THE USE OF SOCIAL NETWORKS BETWEEN THE YOUNG FOREIGNERS WHO TRAVEL TO GALICIA AND ITS IMPLICATIONS IN THE TOURIST AMBIENCE	1254
<i>Belen Fernandez Souto, Ana ; Gestal, Montse Vazquez ; Laxe, Jesus</i>	
SOCIAL NETWORKS IN THE COMMUNICATION STRATEGY OF THE EUROPEAN PUBLIC RADIOTELEVISIONS	1258
<i>Lombao, Tania Fernandez</i>	
THE INNOVATION OF MEDIASET IN RESPONSE OF THE CRISIS	1263
<i>Vazquez, Diana Lago ; Vazquez, Ana Isabel Rodriguez</i>	

THE MANAGEMENT OF CORPORATE SOCIAL RESPONSIBILITY IN MEDIA GROUP THROUGH SOCIAL NETWORKS	1269
<i>Cepeda, Ana Maria Lopez</i>	
MEDIA LITERACY IN STUDENTS IN THE CITY OF LOJA (ECUADOR)	1274
<i>Marin, Isidro ; Rivera, Diana ; Velasquez, Andrea</i>	
NATIVE CYBERMEDIA OF WEB AND SOCIAL NETWORKS: PRESENCE AND ACTIVITY OF SPANISH MEDIA ON FACEBOOK AND TWITTER	1278
<i>Martinez-Fernandez, Valentin-Alejandro ; Boga, Oscar Juanatey ; Pereira, Veronica Crespo</i>	
SOCIAL MEDIA, A NEW SCENARIO FOR TOURISM PROMOTION: AN ANALYSIS OF THE MOST REPRESENTATIVE GALICIAN SPAS IN FACEBOOK	1282
<i>Amboage, Eva Sanchez ; Juanatey-Boga, Oscar ; Martinez-Fernandez, Valentin-Alejandro</i>	
WORKERTUTOR: DESIGN AND IMPLEMENTATION OF A VIRTUAL TUTOR TO LABOR SELF-PROMOTION OF SPANISH WORKERS IN EUROPE	1288
<i>Ramos, Natalia Alonso ; Farina, Xose Pereira ; Larrea, Maria Isabel Punin</i>	
SOCIAL MEDIA COMMUNICATION AND THE WAY OF SANTIAGO	1294
<i>Rodriguez-Fernandez, Maria-Magdalena ; Rodriguez-Vazquez, Clide ; Martinez-Fernandez, Valentin-Alejandro</i>	
WHMS4: AN INTEGRATED MODEL FOR HEALTH REMOTE MONITORING: A CASE STUDY IN NURSING HOMES FOR THE ELDERLY	1300
<i>de Souza Rios, Thiago ; da Silva Bezerra, Romildo Martins</i>	
AUDIOVISUAL CORPORATE COMMUNICATION IN YOUTUBE: SPANISH COMPANIES AUDIOVISUAL MESSAGE: TYPOLOGY AND DEGREE OF INTERACTIVITY	1306
<i>Costa-Sanchez, Carmen</i>	
COMMUNICATION OF OFFICIAL TRAVEL ADVICES ON SOCIAL MEDIA	1312
<i>Muniz, Diego Rodriguez-Toubes ; de la Torre, Jaime Alvarez ; Fernandez, Valentin Alejandro Martinez</i>	
SOCIAL NETWORKS OF CULTURAL PROGRAMS IN TELEVISION OF ECUADOR	1318
<i>Suing, Abel ; Arrobo, Juan Pablo</i>	
THE CHALLENGE TO STRENGTHEN THE VALUE OF PSM: PUBLIC BROADCASTERS IN RECESSION	1324
<i>Bermudez, Andrea Valencia ; Freire, Francisco Campos</i>	
CROWDFUNDING: A FUNDING MODEL THAT SUCCEEDS IN TIMES OF REVOLT OF THE MASSES	1329
<i>Lopez Golan, Monica</i>	
SCIENTIFIC SOCIAL NETWORKS: AFFILIATION, USE AND OPINION OF RESEARCHERS FROM AGACOM	1335
<i>Direito Rebollal, Sabela</i>	
DIGITAL MEDIA PARTICIPATION. A TRENDS OVERVIEW	1340
<i>Orosa, Berta Garcia</i>	
SOLVING PRE-PROCESSED SET COVERING PROBLEMS VIA CUCKOO SEARCH AND LÉVY FLIGHTS	1344
<i>Soto, Ricardo ; Crawford, Broderick ; Barraza, Jorge ; Johnson, Franklin ; Paredes, Fernando</i>	
COMMUNICATION 2.0 TO PROMOTE TOURISM IN IBEROAMERICA: ANALYSIS OF GOVERNMENT WEB PORTALS AND SOCIAL NETWORKS	1350
<i>Altamirano, Veronica ; Lopez, Miguel Tunez ; Paladines, Fanny</i>	
NEUROSCIENCE APPLIED TO THE TEXT AND IMAGES ANALYSIS	1356
<i>Ruas-Araujo, Jose ; Perez-Seoane, Jesus</i>	
APPLICATION OF TECHNICAL COMPUTER ASSISTED AUDIT IN THE PREVENTION AND DETECTION OF FRAUD	1361
<i>Pascual, Evelio Hernandez</i>	
CUID@WEB: A SUPPORTING PLATAFORM FOR INFORMAL CAREGIVERS	1367
<i>Guerra, Helia ; Gomes, Luis Mendes ; Andrade, Carmen ; Simas, Hugo ; Alves, Joao ; Martins, Tiago</i>	
ACADEMIC SOCIAL NETWORKS: PRESENCE AND ACTIVITY IN ACADEMIA.EDU AND RESEARCHGATE OF COMMUNICATION RESEARCHERS OF THE GALICIAN UNIVERSITIES	1371
<i>Dafonte-Gomez, Alberto ; Miguez-Gonzalez, Maria Isabel ; Puentes-Rivera, Ivan</i>	
REFLECTIONS ON PLAYFULNESS, IMAGINATION AND CREATIVITY, THEIR RELATIONS AND OPEN QUESTIONS	1377
<i>Afonso, Ana Paula Varela ; Roque, Licinio</i>	
INFORMATION AUDIT BASED ON ONTOLOGY	1382
<i>Guimaraes, Francisco Santana ; Caldeira, Carlos Pampulim ; Quaresma, Paulo</i>	
SOLVING THE CLASS IMBALANCE PROBLEMS USING RUSMULTIBOOST ENSEMBLE	1389
<i>Mustafa, Ghulam ; Niu, Zhendong ; Yousif, Abdallah ; Tarus, John</i>	

SMARTPHONE ROBOT FOR HIGH SCHOOL STUDENTS: ROBISS	1395
<i>Martins, Bruno ; Costa, Andre ; Caetano, Carlos ; Rodrigues, Carlos ; Ruao, Goncalo ; Lopes, Isaac ; Aguiar, Joao ; Sousa, Pedro ; Silva, Pedro ; Correia, Tiago ; Sousa, Armando</i>	
DISTRIBUTED MULTI-ROBOT COORDINATION COMBINING SEMANTICS AND REAL-TIME SCHEDULING	1399
<i>Lujak, Marin ; Fernandez, Alberto</i>	
A MIXED REALITY GAME USING 3PI ROBOTS — “PITANKS”	1405
<i>Costa, Hugo ; Cebola, Peter ; Cunha, Tiago ; Sousa, Armando</i>	
DEVELOPMENTS TO IMPROVE TEACHING WITH 3D IMAGES	1411
<i>Cota, Manuel Perez ; Castro, Miguel Ramon Gonzalez- ; Pires, Jorge Manuel ; Goncalves, Ramiro</i>	
FLEXIBLE PICK AND PLACE ARCHITECTURE USING ROS FRAMEWORK	1415
<i>Tavares, Pedro ; Sousa, Armando</i>	
ATTRACTIVE DEMONSTRATIONS WITH WIRE PROGRAMMING ROBOT “REDI”	1421
<i>Sousa, Armando ; Moreira, Bruno ; Lopes, Filipe ; Costa, Hugo ; Neves, Susana</i>	
APPLICATION ONTOLOGY FOR THE DEVELOPMENT OF CASE-BASED INTRUSION DETECTION SYSTEMS	1427
<i>Meneses, Rayane ; Leite, Adriana ; Girardi, Rosario</i>	
THE “MALHA” PROJECT: A GAME DESIGN PROPOSAL FOR MULTISENSORY STIMULATION ENVIRONMENTS	1431
<i>Castelhana, Nuno ; Roque, Licinio</i>	
RAIN IN INDOOR RESCUE TRAINING	1436
<i>Ulisses, Joao ; Almeida, Joao Emilio ; Rossetti, Rosaldo J.F.</i>	
DIFFERENT STRATEGIES IN THE DEVELOPMENT OF ANFIS TO RECOGNIZE VOWELS	1442
<i>Valencia-Jimenez, Jesus Julian ; Fernandez-Caballero, Antonio</i>	
ILEARNTEST: EDUCATIONAL GAME FOR LEARNING SOFTWARE TESTING	1448
<i>Ribeiro, Tania P.B. ; Paiva, Ana C.R.</i>	
PLATAFORMA UNIDOSE PARA LARES DOSE PLAFORM FOR ELDERLIES HOMES	1454
<i>Lopes, David Ferreira ; Costa, Nuno Alexandre Ribeiro ; de Jesus Pereira, Antonio Manuel</i>	
FEMALE GENDER REPRESENTATIONS IN DIGITAL MASS MEDIA VIA DISCOURSE ANALYSIS: A CASE STUDY	1458
<i>Niklander, Stefanie ; Soto, Ricardo ; Crawford, Broderick</i>	
A MOBILE GAME FOR ENGAGING STUDENTS ON THE STUDY OF THE NOVEL “OS MAIAS”	1464
<i>Carvalho, Ana Amelia ; Araujo, Ines ; Moura, Adelina</i>	
GAMES4LEARNING: HOW TO INTEGRATE SERIOUS GAMES TO PERSONALIZED LEARNING ITINERARIES?	1470
<i>Grau, Sergi ; Reig, Ramon ; Puig, Anna ; Lopez, Maite ; Rodriguez, Inmaculada</i>	
SOCIAL NETWORK GAMES IN AN AGEING SOCIETY: CO-DESIGNING ONLINE GAMES WITH ADULTS AGED 50 AND OVER	1476
<i>Veloso, Ana ; Costa, Liliana</i>	
THE GAMER'S SOUL NEVER DIES: REVIEW OF DIGITAL GAMES FOR AN ACTIVE AGEING	1482
<i>Costa, Liliana ; Veloso, Ana</i>	
DISTRIBUTED FLIGHT SIMULATION ENVIRONMENT USING FLIGHT SIMULATOR X	1488
<i>Rodrigues, Cristiano ; Silva, Daniel Castro ; Rossetti, Rosaldo J.F. ; Oliveira, Eugenio</i>	
EDUCATIONAL ROBOTICS AND VIDEOGAMES IN THE CLASSROOM	1493
<i>Diaz, Javier ; Queiruga, Claudia ; Tzancoff, Claudia Banchoff ; Fava, Laura ; Harari, Viviana</i>	
COMPUTER-ASSISTED AUDIT TOOLS IN RELATION WITH INTERNATIONAL STANDARD ON QUALITY CONTROL 1 (ISQ1): (BASED ON EXPERIENCES FROM POLISH SMALL AUDIT PRACTICES)	1499
<i>Maciejewska, Izabela</i>	
PUBLIC VALUE TESTS IN THE BRITISH AND GERMAN PUBLIC BROADCASTERS	1503
<i>Castro, Marta Rodriguez</i>	
DIGITAL GAMES IN CATALAN CLASSROOMS: TEACHER'S POINT OF VIEW (2)	1507
<i>Eguia, Jose Luis ; Solano-Albajes, Lluís ; Espinosa, Ruth S.Contreras</i>	
O USO DO SCRATCH NAS ATIVIDADES COLABORATIVAS DE TIC	1513
<i>Pinto, Ana ; Escudeiro, Paula</i>	
GAMES TO SUPPORT PROBLEM-BASED LEARNING	1517
<i>Andrade, A. ; Gouveia, D. ; Nogueira, F. ; Russo, P. ; de Carvalho, C.Vaz</i>	
DESIGN OF MULTIMEDIA SYSTEMS FOR CHILDREN WITH SOME KIND OF DISABILITIES	1521
<i>Heredia, Diego Leonardo ; Cota, Manuel Perez</i>	

MOTIVATIONS AND LIMITATIONS ON THE USE OF INFORMATION TECHNOLOGY ON STATUTORY AUDITORS' WORK: AN EXPLORATORY STUDY	1525
<i>Pedrosa, Isabel ; Costa, Carlos J. ; Laureano, Raul M.S.</i>	
POKER LEARNER: PLAYERS MODELING THROUGH DATA-MINING.....	1531
<i>Silva, Nuno ; Reis, Luis Paulo</i>	
DATA MINING AND DECISION SUPPORT SYSTEMS FOR CLINICAL APPLICATION AND QUALITY OF LIFE.....	1537
<i>Ferreira, Mario ; Reis, Luis Paulo ; Faria, Brigida Monica ; Goncalves, Joaquim ; Rocha, Alvaro</i>	
JOURNALISTS ON ONLINE SOCIAL NETWORKS: HOW TECHNOLOGY IS CHALLENGING JOURNALISM ETHICS	1543
<i>Mateus, Catia</i>	
DATA MINING AND ELECTRONIC DEVICES APPLIED TO QUALITY OF LIFE RELATED TO HEALTH DATA.....	1549
<i>Goncalves, Joaquim ; Faria, Brigida Monica ; Reis, Luis Paulo ; Carvalho, Victor ; Rocha, Alvaro</i>	
QOLIS — HEALTH BUSINESS ANALITICS PLATFORM BASED ON QUALITY OF LIFE RELATED WITH HEALTH.....	1553
<i>Goncalves, Joaquim ; Carvalho, Victor ; Reis, Luis Paulo ; Faria, Brigida Monica ; Rocha, Alvaro</i>	
ONLINE LOCAL MEDIA'S STRATEGIES FOR SOCIAL NETWORKS: THE CASE OF LA VOZ DE GALICIA	1558
<i>Garcia, Xose Lopez ; Rodriguez, Ana I. ; Soengas, Xose</i>	
Author Index	