# TABLE OF CONTENTS

FOREWORD xiii  
PROGRAM COMMITTEE xvii  
KEYNOTE LECTURES xxi  
KEYNOTE PAPER xxiii  

## FULL PAPERS

EVALUATION OF WEB ACESSIBILITY: A STUDY AIMED FOR USERS WITH CEREBRAL PALSY  
Ariane Oliveira Ferreira, Simone Bacellar Leal Ferreira, Denis Silva da Silveira and Aurélio Fernando Ferreira  

AN EXPERIENCE IN USER INTERFACE DESIGN FOR A COLLABORATIVE WEB SYSTEM ADRESSED FOR DEAF USERS  
Luis Henrique E. Lopes, Vandhuy Fernandes Martins, Danilo Assis, Tiago Maritan U. de Araújo, Tatiana Aires Tavares and Guido Lemos de Souza Filho  

ADDRESSING DIVERSITY IN WEB SYSTEMS WITH NORMS AND A TAILORING-BASED APPROACH  
Vânia Paula de Almeida Neris, Frederico Fortuna, Rodrigo Bonacin and M. Cecília C. Baranauskas  

EVALUATION OF USABILITY IN A REMOTE LEARNING SYSTEM UTILIZING MARKOV MODELS  
Janaina Rodrigues, Morganna Diniz, Simone Bacellar Leal Ferreira, Denis S. Silveira and Eliane Capra  

THE VALUE OF VALUE IDENTIFICATION IN WEB APPLICATIONS  
Roberto Pereira, M. Cecília C. Baranauskas and Leonelo Dell Anhol Almeida  

UBICUA: A CUSTOMIZABLE USABILITY INSPECTION APPROACH FOR WEB MOBILE APPLICATIONS  
Bruno Bonifácio, Priscila Fernandes, Horácio A. B. F. de Oliveira and Tayana Conte  

A HYBRID SYSTEM FOR ANALYSIS AND DETECTION OF WEB-BASED CLIENT-SIDE MALICIOUS CODE  
Vítor Monte Afonso, André Ricardo Abed Grégio and Durio Simões Fernandes Filho  

ANALYSIS OF THE VOLUNTARY EXPOSURE OF PRIVATE INFORMATION OVER THE INTERNET  
Juliano Quadrado and André Peres
A FRAMEWORK FOR WEB 2.0 SECURE WIDGETS
Vagner Figuerêdo de Santana, Maria Cecília Calani Baranauskas and Marco Aurélio Amaral Henriques

IMPLEMENTING SEMANTIC QUERIES IN ONLINE SOCIAL NETWORKS
Jair Abú Bechir Lásca Alarcón, Otávio Calaça Xavier and Cedric Luiz de Carvalho

AN OVERVIEW AND ROADMAP OF SOFTWARE ENGINEERING CONTRIBUTIONS FOR ONTOLOGIES DEVELOPMENT
Marcelo Almeida, Fred Freitas and Alexandre Vasconcelos

DETECTING IMPLICITLY MENTIONED PLACES IN TEXT USING AN ONTOLOGICAL GAZETTEER
Ivre Marjorie Ribeiro Machado, Clodoveu A. Davis Jr. and Roberto de Oliveira Campos Junior

A SOFTWARE ARCHITECTURE TO PROVIDE PERSISTENCE AND RETRIEVE OF CONTEXT DATA BASED ON ONTOLOGICAL MODELS
Vinicius Maran, Deise de Brum Sacco, Iara Augustin and Alencar Machado

BLOGGING, POLITICAL PARTICIPATION AND MOBILIZATION IN THE ISLAMIC MIDDLE EAST: A CRITICAL ANALYSIS OF THE IRANIAN BLOGOSPHERE
Farid Shirazi

TAG-BASED AND POST-BASED SERVICES FOR TAG RECOMMENDATION
Rafael Ferreira, Rinaldo Lima, Dimas Melo Filho and Fred Freitas

AN OVERVIEW OF THE COMMUNICABILITY EVALUATION METHOD FOR COLLABORATIVE SYSTEMS
Bernardo A. M. Mattos and Raquel O. Prates

EMPOWERING COLLABORATION AMONG THE DEAF: INTERNET-BASED KNOWLEDGE CREATION SYSTEM
Cayley Guimarães, Diego R. Antunes, Laura S. García, Sueli Fernandes and Aléssio Miranda Júnior

COMPETENCE MANAGEMENT IN TRAIL-AWARE ENVIRONMENTS
João Rosa, Cassiano Campes, Jorge Barbosa, Cristiano Costa and Marcos Kich

A FORMAL MODEL TO THE ROUTING QUESTIONS PROBLEM IN THE CONTEXT OF TWITTER
Cleyton Caetano de Souza, Jonathas José de Magalhães and Evandro de Barros Costa

SOCIAL MEDIA MARKETING WITH FACEBOOK: A CASE STUDY
Christoph Trattner and Frank Kappe

ANALYSIS OF W-ENTROPY INDEX TO MEASURE THE INFLUENCE ON SOCIAL NETWORKS
Li Weigang, Zheng Jianya and Daniel LeZhi Li

TEMPORAL INFLUENCE IN COLLABORATORS RECOMMENDATION ON SOCIAL NETWORKS
Giseli Rabello Lopes, Mirella M. Moro and J. Palazzo M. de Oliveira

IMPROVING NEWS WEB PAGE CLASSIFICATION THROUGH CONTENT EXTRACTION
Rafael Ferreira, Rinaldo Lima, Dimas Melo Filho, Hilário Tomaz and Fred Freitas
ON THE CONSTRUCTION OF A WORKLOAD GENERATOR FOR BLOGGING SYSTEMS
Mariela J. Curiel H. and Guillermo J. Heuer R.

HOW DO SOCIAL NETWORKS INFLUENCE LEARNING OUTCOMES? A CASE STUDY IN AN INDUSTRIAL SETTING
Seid Maglajlic and Denis Helic

A TOOL FOR VIDEO COLLABORATION IN TELEMEDICINE
Tatiana Aires Tavares, Anderson Vinicius Ferreira, Elenilson Vieira da Silva Filho, Julio César Ferreira da Silva, Erick Gomes de Melo, Gustavo Motta and Guido Lemos de Souza Filho

A CLASSIFICATION-BASED APPROACH FOR BIBLIOGRAPHIC METADATA DEDUPLICATION
Eduardo N. Borges, Karin Becker, Carlos A. Heuser and Renata Galante

A SEMANTIC LEARNING OBJECT COMPOSITION: AN EXPERIMENT BASED ON THEORY OF DISCOURSE
Herli J de Menezes, Sean W. M. Siqueira and Leila C. V. de Andrade

SITUATIONS AND ONTOLOGY NETWORKS TO DEFINE ADAPTIVE ACTIONS IN E-LEARNING SYSTEMS
Ana Marilza Pernas, Alicia Díaz, Regina Motz and Jose Palazzo M. de Oliveira

DISPLAY SYSTEM OF ADJUSTABLE LIBRAS WINDOW FOR EDUCATIONAL CONTENTS ON THE WEB AND BRAZILIAN DIGITAL TV
Edson Benedito dos Santos Junior, Hilda Carvalho de Oliveira and Celso Socorro Oliveira

USING METADATA AND WEB METRICS TO CREATE A RANKING OF GENOMIC DATABASES
Daniel Lichtnow, Ana Levin, Ronnie Alves, Ignacio Medina Castello, Joaquin Dopazo, Oscar Pastor and José Palazzo Moreira de Oliveira

DECISION-MAKING UNDER UNCERTAIN ONLINE INFORMATION: THE ROLE OF WEB GOVERNANCE
Varol Kayhan and Anol Bhattacherjee

SECURE AND RELIABLE ONLINE-VERIFICATION OF ELECTRONIC SIGNATURES IN THE DIGITAL AGE
Thomas Zefferer, Bernd Zwattendorfer, Arne Tauber and Thomas Knall

THE “.IT” DOMAIN MARKET: DETERMINANTS OF DIGITAL DIVIDE IN ITALY
Michela Serrecchia, Maurizio Martinelli and Irma Serrecchia

QUALITY AND PERFORMANCE ASSESSMENT OF JQUERY JAVASCRIPT FRAMEWORK
Andreas Gizas, Sotiris P. Christodoulou and Theodore S. Papaioannou

SEMANTIC CONCEPTS FOR CONTENT FILTERING ON VIDEO SHARING SOCIAL NETWORKS
Antonio da Luz, Eduardo Valle and Arnaldo de A. Araújo

A FRAMEWORK TO DEVELOP META WEB INTERFACES
José Paulo Leal and Hugo Dias

EXPLOITING DOCUMENT STABILITY LEVEL FOR EFFICIENT TEMPORALLY-AWARE CLASSIFICATION
Thiago Salles, Isac Sandin, Luiz Carlos Oliveira, Leonardo Rocha and Marcos André Gonçalves
A SUBJECTIVITY DETECTION METHOD FOR OPINION MINING BASED ON LEXICAL RESOURCES
Eduardo Bezerra, Bianca Firmino, Rafael Castaneda, Jorge Soares, Eduardo Ogasawara and Ronaldo Goldschmidt

MINING ASSOCIATION RULES USING ONTOLOGIES FROM STRUCTURED AND UNSTRUCTURED DATA
Cássio Oliveira Camilo, João Carlos da Silva, Auri Marcelo Rizzo Vincenzi and Cedric Luiz de Carvalho

FRAUD DETECTION IN ELECTRONIC TRANSACTIONS
José Felipe Jr., Adriano Veloso, Wagner Meira Jr. and Adriano Pereira

YAGDA: P2P-BASED FILE TRANSFER IN GRIDS
Kay Dörnemann, Rene Greuel, Matthias Leinweber, Till Gehrke and Bernd Freisleben

ANOMALY DETECTION USING HOLT-WINTERS FORECAST MODEL
Alex Soares de Moura and Sidney Cunha de Lucena

A P2P COLLABORATIVE PROPOSAL FOR WIRELESS NETWORK DISCOVERY FOR FUTURE INTERNET
Obionor Nóbregra, Malbon Santos, Kelvin Dias and Paulo R. F. Cunha

EXPLOITING ENTITY SEMANTICS FOR QUERY EXPANSION
Wladmir Cardoso Brandão, Altigran Soares da Silva, Edleno Silva de Moura, Nivio Ziviani

FORMAL GRAMMAR FOR THE NORMALIZATION OF RELATIVE TEMPORAL EXPRESSIONS
Leandro Gallina, Renata Galante and Carina F. Dorneles

A SIMILARITY SEARCH METHOD FOR WEB FORMS
Rodrigo Gonçalves, Caio D’agostini, Filipe R. Silva, Carina F. Dorneles and Ronaldo Dos Santos Mello

AN APPROACH TO EXTRACT AND VISUALIZE GEOGRAPHIC PLACES WITHIN NEWSPAPERS COVERS BY USING A GEOPARSING WEB SERVICE
Rocio Abascal-Mena and Erick López Ornelas

ARAPONGA: A WIRSS FOR INTERNET ANOMALIES AND VULNERABILITIES
Eduardo Feitosa, Thiago Gomes Rodrigues, Judith Kelner and Djamel Sadok

EXTRACTION OF EVOLUTIVE FEATURES IN RECOMMENDATION DOMAINS
Fernando Mourão, Alan Cardoso, Leonardo Rocha and Wagner Meira Jr.

SHORT PAPERS

MEASURING NODE IMPORTANCE: A MULTI-CRITERIA APPROACH
Leila Weitzel, Paulo Quaresma and José Palazzo M. de Oliveira

SOCIAL NETWORKING AMONG THE SOUTH AFRICAN YOUTH: ADVANTAGES AND DISADVANTAGES
Yoliswa Makhasi and Antoinette Basson
ANALYSIS OF STUDENTS INTERACTION PROFILE IN ONLINE SOCIAL NETWORKS
Roberto Felício de Oliveira, Alisson Vasconcelos Brito and Alexandre Nobrega Duarte

SIC: A SOCIAL NETWORK FOR THE DISSEMINATION AND THE SUPPORT TO THE INTERDISCIPLINARY SCIENTIFIC RESEARCHES IN UNIVERSITIES
Cleyton Caetano de Souza, Eduardo Ribas Pinto, Tiago Davi Neves de Sousa, Renê Nóbrega de Sousa Gadelha and Ryan Ribeiro de Azevedo

SOCIAL MEDIA IN EXPERT NETWORKS HANDLING SAFETY - EXPERIENCES FROM THREE CASES
Jouko Heikkilä, Pirjo Näikki, Kaarin Ruohilehto, Asta Bäck, Suvi Pihkala, Jukka Huhtamäki and Anne Tervakari

SEMI-AUTOMATIC SENTIMENT ANALYSIS: RESULTS FROM A CASE STUDY IN PORTUGUESE WEB 2.0 SITES
Gleicon Moraes and Marco Aurélio Gerosa

A RECOMMENDER SYSTEM ENHANCED THROUGH A SOCIAL NETWORKING SITE
Matthew Montebello, Vanessa Camilleri and Olaf Buhagiar

THE DIGITAL INTERACTIVE TV AND NEWS COMPETENCES IN CITIZEN TV JOURNALISM
Ed Porto Bezerra, Sheila Accioly and Ana Paula Goulart

PERFORMANCE EVALUATION AND TUNING OF SPREADING ACTIVATION FOR ASSOCIATIVE INFORMATION RETRIEVAL
Renato Fileto, Wanderson Rigo, Vilmar César Pereira Junior, Roberto Willrich and Vinícius de Araújo

SERIN – SEMANTIC RESTFUL INTERFACES
Bruno de Azevedo Muniz, Laura M. Chaves, Júlio Cesar Campos Neto, José Renato Villela Dantas and Pedro Porfirio Muniz Farias

EFACTAGENT: AGENT ARCHITECTURE FOR MANAGEMENT, SEARCH AND RETRIEVAL OF E-LEARNING ARTIFACTS
Regina Braga, Fernanda Campos, Neide Santos and Ana Cláudia Souza

ONTOLOGY FOR WEB SERVICES STRUCTURAL SIMILARITIES
Maricela Bravo and Matías Alvarado

AN AGENT-ORIENTED SYSTEM FOR CONTEXTUALIZED WEB QUERIES
Eduardo Fritzen, Sean W. M. Siqueira and Leila Cristina V. de Andrade

LEARNING STYLES AND KNOWLEDGE BASED PERSONALIZED ONLINE LEARNING SERVICES
Uday Kumar M, Mamatha J, Sandesh Jain and Dhanander K Jain

IMPROVING ADAPTIVE APPROACHES IN E-LEARNING: COMBINING ONTOLOGIES FOR CULTURAL-AWARE USER MODELING
Isabela Gasparini, Amel Bouzeghoub, José Palazzo M. de Oliveira and Marcelo S. Pimenta

EXPERIENCES OF THE E-LEARNING IMPLEMENTATION USED FOR ADOPTION OF EMERGING TEACHING AND LEARNING MODELS AND STRATEGIES AT THE EDUARDO MONDLANE UNIVERSITY, MOZAMBIQUE
Xavier Muinanga and Inocente Mutimucuo
FROM FATIGUE TO ANXIETY? IMPLICATIONS FOR EDUCATIONAL DESIGN IN A WEB 2.0 WORLD 500
David Mathew

EARLY RECOGNITION OF DEPRESSION AT DIABETES MELLITUS WITH THE COGNITIVE MEDICAL SYSTEM COMES 505
Thomas Spittler, Michael Handwerker, Petra Friedrich and Bernhard Wolf

ADDING CONTEXT DATA PERSISTENCE BASED ON ONTOLOGIES IN A UBIQUITOUS HEALTHCARE ARCHITECTURE 509
Vinicius Maran, Deise de Brum Saccol, Iara Augustin and Alencar Machado

INNOVATIVE TOOLS AND MODELS FOR E-LEARNING 515
Liviu Moldovan

INTERNET AND DISTANCE EDUCATION: APPLICATIONS FROM UNIVERSIDADE ABERTA DO BRASIL MODEL 520
Romualdo Mendes Carvalho Barreiro and Leila Cristina Vasconcelos de Andrade

ANALYSIS OF PRODUCT EVALUATIONS AND REVIEWS IN INTERNET SHOPPING SITES 525
Tetsuya Maeshiro, Eiko Ishikawa and Eriko Shikama

BEHAVIOR ANALYSIS OF ELDERLY USERS ON PURCHASING TRANSACTIONS AT THE AMERICANAS.COM WEBSITE 530
Rafael Xavier E. de Almeida, Simone Bacellar Leal Ferreira and Denis Silva da Silveira

ENRICHING THE BROWSING EXPERIENCE 535
Matthew Montebello, Vanessa Camilleri and Simon Theuma

KNOWLEDGE REPRESENTATION OF BRAZILIAN OFFICIAL GAZETTES FOR CHRONOLOGICAL RECOVERY OF LAWS 540
Stainam Brandao, Tiago Silva, Sergio Rodrigues, Luis Araujo, Daniel Silva and Jano M. Souza

DETECTION SYSTEMS: A WAY TO IMPROVE THE QUALITY IN THE ITALIAN PUBLIC ADMINISTRATION 545
M. Martinelli, P. Lazzareschi, A. Del Soldato and G. Vasarelli

TEACHING COMPUTER NETWORKING THROUGH INTERACTIVE TECHNOLOGIES 551
Kun Shao

KANON: A FRAMEWORK TO CHARACTERIZE WEB APPLICATIONS DEVELOPMENT 556
Adelaïde Bianchini, Ascânder Suárez and Carlos A. Pérez Díaz

OPEN TOURISM – AN ETOURISM CONCEPT 561
Mihăescu Vlad and Vasile Radu

AN INTEGRATED PROVISIONING TOOLCHAIN FOR THE INTERNET OF SERVICES 566
Josef Spillner, Anne Kümpel, Stefan Uhlig, Iris Braun and Alexander Schill

USING VIRTUAL MACHINE REPlication FOR DYNAMIC CONFIGURATION OF MULTI-TIER INTERNET SERVICES 571
Carlos Oliveira, Vinicius Petrucci and Orlando Loques
A NAVIGATION MAP TO EXPLORE MICROBIAL INFORMATION IN A SCIENTIFIC DATABASE
J. Sergio Zepeda, Erick López, Rocío Abascal, Carlos Jaimez and W. Arturo Luna

GAAP - GENERIC ANDROID APPLICATION PROGRAMMING
Horst Hellbrück, Philipp Krummenauer and Torsten Teubler

IDENTIFYING USABILITY PROBLEMS IN WEB APPLICATIONS THROUGH ANALYSIS OF USER INTERACTION LOGS USING PATTERN RECOGNITION
Gisele Alves Santana and Luciano Tadeu Esteves Pansanato

REFLECTION PAPERS

APPLICATION OF KNOWLEDGE PILLS TO DEGREE OF MECHANICAL ENGINEERING LEARNING PROCESS. QUALITATIVE AND QUANTITATIVE ANALYSIS OF RESULTS
Carlos Ulloa, Jose Maria Pousada, Belén Barragán and Guillermo Rey

ON THE PREDICTABILITY OF ELECTIONS USING SOCIAL MEDIA DATA
Panagiotis T. Metaxas

POSTERS

SICIT – COLLABORATIVE SYSTEM OF TRAFFIC INFORMATION
José Eurico de Vasconcelos Filho and Douglas Nogueira Oliveira

SEMANTIC QUERIES IN KNOWLEDGE TV SUPPORTED BY KNOWLEDGE DISCOVERY
Ramon Nóbrega dos Santos, Marcelle Batista Martins, Manoel de Albuquerque Lira Amaro, José Carlos Almeida Patricio Júnior and Natasha Correia Queiroz Lino

USING THE TIME COURSE OF SOCIAL BOOKMARKING TO ENHANCE SEARCH
Taiki Ueno and Michiaki Yasumura

DESIGNING A HEALTH LITERACY WEBSITE FOR KIDS WITH EPILEPSY
Rodrigo Gustavo Silvestre and Júnia Anacleto Coutinho

THE EFFECTIVENESS OF ELECTRONIC COMMUNICATION
Georg Peters, Jan Seruga and Veronika Zellmer

AUTHOR INDEX