

2011 6th Colombian Computing Congress

(CCC 2011)

**Manizales, Colombia
4 – 6 May 2011**



IEEE Catalog Number: CFP1101P-PRT
ISBN: 978-1-4577-0285-3

TABLE OF CONTENTS

ZuRoutine: Perzonalized Model of Exercise Routines	1
<i>L. Barrera, A. Ramos, A. Barraza, S. Martinez</i>	
Climatic Regionalization using Data Mining Techniques: A Case of Study	7
<i>G. Molero-Castillo, M. Meda-Campana</i>	
Verification of JML Generic Types with Yices	13
<i>N. Catano, C. Rueda, S. Hanvey</i>	
Incorporation of Both Pre-conceptual Schemas and Goal Diagrams in CRISP-DM	19
<i>C. Zapata, N. Gil</i>	
Approach to Requirements Analysis Applied to an Interactive Digital Television System iDTV	25
<i>B. Valderrama, D. Luis, U. Giraldo</i>	
Shape Recognition Using Machine Learning	32
<i>S. Gomez</i>	
Surface Registration Using Laser Triangulation Techniques	35
<i>E. Fuentes-Aliaga, D. Aracena-Pizarro</i>	
Implementation of IPv6 in “Instituto Tecnológico de Soledad Atlántico” Campus Network	41
<i>C. Ricardo</i>	
A Prototype of Synthetic Data Generator	47
<i>D. Garcia, M. Millan</i>	
Evit, Herramienta De Apoyo Al Prototipado R´Apido En Aplicaciones De Realidad Virtual	53
<i>C. Benavides, J. Larrota</i>	
Students’ Motivational Factors during a Collaborative Laboratory Work Supported by Moodle	59
<i>L. Echeverria</i>	
Design of an Electronic Instrumentation Virtual Laboratory based on Free-Open Resources	65
<i>G. Meneses</i>	
Survey: Termites System With Self-Healing Based On Autonomic Computing	71
<i>A. Portela, J. Perdomo</i>	
Attacks Prevention Model using Semantic Correlation and Multiagent Systems	77
<i>G. Isaza, N. Duque, L. Castillo, M. Lopez</i>	
A Generic Adaptation Contextual Model based on Agents	83
<i>A. Carrillo-Ramos, M. Arias-Baez, L. Torres-Ribero, J. Ruiz, E. Gonzalez</i>	
Smartchat: A Virtual Peer Agents Based Chatterbot For Supporting Educational Processes	89
<i>N. Mendez, V. Hincapie, J. Leal, J. Lopez, D. Moncada, M. Ocampo, L. Tabares, S. Restrepo, A. Cardozo</i>	
Scenario Configuration For Fluid Spill In Urban Dynamic Spaces	95
<i>N/A</i>	
Development of a Zoned Genetic Algorithm for Semi-flexible Protein-ligand Docking in Drug Design	101
<i>P. Rondon, H. Arguello, R. Torres</i>	
Mining Cellular Automata Models on Protein Folding Trajectories	105
<i>N. Diaz, I. Tischer</i>	
Bioescenarios VI . Bee Colony	111
<i>M. Rozo, F. Espindola, G. Pulido</i>	
Automation Of Bioinformatic Tools To Detect Gene Fusion Events In The Leishmania Braziliensis And Leishmania Major Genomes	117
<i>R. Ochoa, J. Ochoa, C. Muskus</i>	
Visualization and Synthesis of Data using Manifold Learning Based on Locally Linear Embedding	123
<i>A. Alvarez-Meza, J. Valencia-Aguirre, G. Daza-Santacoloma, C. Acosta-Medina, G. Castellanos-Dominguez</i>	
Designing a Computational Model to Support the Use of a Risk Management Process Software Projects	129
<i>L. Aroca, L. Sierra, R. Naranjo</i>	
MENTA: A Model-Driven Architecture to Enable Self-Adaptive SOA Systems	135
<i>B. Perez, D. Correal</i>	
Database Of Medical Images For Development Of Teaching Materials For Classes Of Coloproctology	141
<i>C. Flores, M. Bez, E. Zanatta, J. Cruz, G. Pereira, A. Moreira, R. Sebastiani, R. Vicari</i>	
Mental Health Information Web Search and Semantic Search Extension	149
<i>D. Ramirez, P. Lago, D. Borda, C. Jimenez-Guarin</i>	
Serious Games In Complex Urban Environments: Learning Through Education And Fun	155
<i>J. Llanos, P. Forero</i>	

Preconceptual-Schema-Based Representation Of KAOS Goal Diagram	163
<i>C. Zapata, L. Lezcano, P. Tamayo</i>	
MQoS: A Novel Handoff Algorithm for Heterogeneous Networks	169
<i>F. Paez, J. Trivino</i>	
Supporting the Combination and Integration of Multiple Standards and Models	175
<i>C. Pardo, F. Pino, F. Garcia, M. Piattini, M. Baldassarre</i>	
Seat & Play: A Virtual Learning Environment for Harmony	181
<i>G. Restrepo, J. Herrera</i>	
WEM – Estimation Methodology To Determinate The Economic And Financial Viability Of Web Projects	186
<i>D. Duarte, C. Gaona, D. Daniel</i>	
Automated Reasoning for Derivation of Products in MD-SPLE	193
<i>V. Vargas, J. Diaz</i>	
MediCom: Herramienta de Telemedicina para el Análisis de Imágenes e Información Compartidas	197
<i>A. Urueta, D. Osorio, L. Valencia</i>	
Fast Parallel Algorithm For Audio Content Retrieval On GPUs	203
<i>A. Sanabria, J. Oyaga, C. Bonilla</i>	
An Approach for Estimating the Fundamental Matrix	207
<i>D. Calderon, M. Trujillo</i>	
Performance Analysis On Multicore System Using Papi	213
<i>E. Barragan, J. Steves</i>	
Deriving Collaborative Models from Business Process Models	218
<i>F. Giraldo, A. Alzate, L. Duarte, M. Tobon, B. Hoyos</i>	
Wide Area Networks Projection With Kalman State Estimator	223
<i>N. Rubio, O. Pulido, E. Pinto, L. Valencia</i>	
Experiences In Developing An E-Learning System For Language Learning And Teaching	228
<i>L. Villegas, P. Carrillo</i>	
Towards Automatic Quality Assessment of Tomograms of Cataclysmic Variable Stars	234
<i>J. Pavlich-Mariscal, E. Unda-Sanzana, I. Alfaro</i>	
An Approach to Telemedicine Intelligent, through Web Mining and Instrumentation Wearable	239
<i>M. Baron, C. Cifuentes, J. Velasquez, L. Rodriguez</i>	
A Framework for Semantic Analysis of Histopathological Images Using Nonnegative Matrix Factorization	244
<i>A. Cruz-Roa, G. Diaz, F. Gonzalez</i>	
Middleware Independent Of The Platform For Definition And Implementation Of Generic Services In Mobile Devices	251
<i>L. Francisco, C. Esteban</i>	
Collective Knowledge Of The Web: Source Of Information Of Process Of Business Intelligence	257
<i>M. Rojas, J. Mesa</i>	
Fast Automated Detection Of Cmes Fronts Relevant For The Space Weather Program	263
<i>J. Hernandez-Charpak, C. Perez-Romanello, M. Hernandez-Hoyos</i>	
Traffic Flow Control Using Artificial Vision Techniques	269
<i>E. Ospina, E. Tascon, J. Valencia, C. Madrigal</i>	
Automatic Segmentation of Pulmonary Arterial Tree in Computer Tomography Images	273
<i>F. Gutierrez, D. Ortega, M. Orkisz, L. Uriza, M. Hoyos</i>	
Multimodal Image Collection Summarization Using Non-Negative Matrix Factorization	279
<i>J. Camargo, F. Gonzalez</i>	
Data Mining: A New Opportunity To Support The Solution Of Public Health Issues In Colombia	285
<i>D. Roa, J. Bautista, N. Rodriguez, M. Villamil, A. Jimenez, O. Bernal</i>	
ALSHI: Adaptive Learning System for Hearing Impaired	291
<i>D. Iancheros, A. Carrillo-Ramos, J. Lara</i>	
Extensible Executable Models In The Development Of An Eportfolio	296
<i>G. Garcia, J. Salcedo</i>	
Service Oriented Architecture: A Model Driven Governance Maturity Classifier	304
<i>A. Diaz, D. Correal</i>	
Classification Of Unaligned Sequences Based On Prototype Motifs Representation	310
<i>G. Arango-Argoty, J. Jaramillo-Garzon, S. Rothlisberger, C. Castellanos-Dominguez</i>	
Automatic Segmentation Of Adipose Viseral Tissue From CAT Images, Employing Anatomical Invariants	315
<i>R. Mendoza, A. Sanchez, L. Uriza, M. Hoyos</i>	
Unsatisfied Goal-Oriented Formations UGF	321
<i>D. Velasquez, S. Duarte, E. Guerrero</i>	

Architecture for the Support of the Video on Demand Service for Virtual Academic Communities on IPTV	327
<i>D. Duran, R. Ceron-M, J. Arciniegas-H</i>	
Distributed Query Execution Adaptation	333
<i>A. Pomares</i>	
SIMPCE – Mobility Of People In Enclosed Spaces	339
<i>F. Avellaneda-Pachon, J. Gomez, A. Rodriguez</i>	
Evaluation of Structural and Energetic Protein Properties on the Villin Folding Simulation	344
<i>L. Garreta, I. Tischer</i>	
User Satisfaction in the Human-Computer Interaction	350
<i>I. Kafure</i>	
Case-Based Reasoning And Real-Time Systems: Exploiting Successfully Poorer Solutions	356
<i>M. Bedia, M. Aguilera, L. Castillo, L. Uribe, M. Manrique, G. Isaza</i>	
Validation and Calibration of Quantitative Models for Software Development Effort and Size Estimation	360
<i>M. Alba-Castro, S. Gil</i>	
Multiagent System for the Cognitive and Collaborative Filtering on WEB Pages Using GAIA Methodology	366
<i>O. Franco, L. Castillo, G. Isaza</i>	
Author Index	