2013 XXXIX Latin American Computing Conference

(CLEI 2013)

Naiguata, Venezuela 7-11 October 2013



IEEE Catalog Number: CFP1325S-POD **ISBN:**

978-1-4799-1338-1

Table of Contents

- 1. 2-C6: An fine-grained algorithm to achieve 2-consistency[…]% Marlene Arangú and Miguel Salido
- 2. A library for parallel thread-level speculation-Jose Aguilar and Kahlil Campero
- 3. A Maturity Model for Lesson Learned GAIA L.A.: A Case Study aiming to increase the quality of Knowledge Management in Software Development^{.....}&\$

Anderson De Souza Góes, Marco Ikuro Hisatomi, and Rodolfo Barros

4. A novel approach for image feature extraction using HSV model color and filters wavelets """ % Cristian José López Del Alamo, Lizeth Joseline Fuentes Pérez, Luciano

Arnaldo Romero Calla, and Wilber Roberto Ramos Lovón

- 5. A Perception Group Decision Model to Evaluate Corporate Reputation', Ana Casado, Estela Yanez, and Jose Peláez
- 6. A process for Aspect-Oriented Quality Requirements Engineering: AOQuaRE^{.....}(*

Isi Castillo, Francisca Losavio, and Alfredo Matteo

7. A Process Model based on Enterprise Architecture for ICT Management^{.....})+

Jonás Montilva, Judith Barrios, William Montilva, and Isabel Besembel

- 8. A Proposal of a Software Package Insert Using Mind Maps^{……}* + Fernando Cesar De Lima, José Augusto Fabri, and Alexandre L'Erario
- A Quasi-Newton Optimization Algorithm to Solve Molecular Distance Geometry Problems^{****}+(Mario Salvatierra
- **10. A Study of the ICP Algorithm for Recognition of the Hand Alphabet** Juarez Silva Júnior, Marcus V. Lamar, and Jacir L. Bordim
- **11. About Fuzzy Query Procesing**[…], * José Tomás Cadenas, Leonid Tineo, and Ricardo Timarán Pereira
- 12. AINIDIU: An experience among university, organizations and government^{.....}-+ Janio Jadan

Thiago Neves and Jacir Luiz Bordim

Glendys Muñoz, Milagros Barrera, Vanessa Miguel, Nora Montaño, Haydemar Nuñez, and Esmeralda Ramos

Maria Elena Villapol, Zenaida Castillo, Alecia Acosta, Adrian Bottini, Rhadamés Carmona, Harun Juhasz, Carlos Acosta, and Marco Gómez

- 16.Analytical Performance Evaluation of Native IPv6 and Several Tunneling Technics using Benchmarking Tools^{.....}%' Francisco Sans and Eric Gamess

Gastón Scilingo, María Marta Novaira, Renzo Degiovanni, and Nazareno Aguirre

- **18. Approaches for the 2D 0-1 Knapsack Problem with Conflict Graphs** """%) % Thiago Alves de Queiroz and Flávio Keidi Miyazawa
- 19. Automatic detection of motorcyclists without helmet[…]) -Romuere Silva, Kelson Aires, Thiago Santos, Kalyf Abdala, Rodrigo Veras, and André Soares
- 20. Automatic generation of SOAs for Business Process execution: a vision based on models **** % ** Andrea Delgado and Laura González
- 21.Beyond digital inclusion: Social appropriation of information and communication technologies **** Nancy Zambrano
- 22. Business Process Verification using a Formal Compositional Approach and Timed Automata^{.....}% + Luis Eduardo Mendoza Morales
- 23. Calibration of the parameters of ESS System for Forest Fire Prediction **** % + Germán Bianchini and Paola Caymes-Scutari
- **24. Comparison and Fusion Model in Protein Motifs8+** Junior Altamiranda, Jose Aguilar, and Christian Delamarche
- 25. Cultural Algorithms-Based Learning Model for Multi-Agent Systems 38% Juan Carlos Terán Picón, Jose Aguilar, and Mariela Cerrada
- **26. Design and Implementation of a Computer Security Diploma **** *** *** ***** Gustavo Betarte and María Eugenia Corti
- 27. Design and Implementation of an Intelligent System to detect Quality State of Temperature Defects in Hot Rolled Strips^{……}& + Magaly Castro, Alejandro Zambrano, Olga Prado, Yolimar Espinoza, Juan García, Julio Temprano, Esnardo Morales, and Marlon Rojas
- 28. Design of Activities for CS1: A Competences Oriented Approach (unpacking the Informed Design Teaching and Learning Matrix)^{.....}&((Alejandro Adorjan and Inés Friss de Kereki
- 29. Design, Construction and Implementation of a Professional Education Program of Software Engineering. Design Curriculum Experience for the Software Industry^{.....}&) \$

Erika Paola Holguin Ontiveros and Sandra Valbuena Antolinez

- **30. Diagnosability Behaviour over Faulty Concurrent Systems**&* & Gonzalo Bonigo and Laura Brandán Briones
- 31.Distributed Chronicles for Recognition of Failures in Web Services Composition^{……}&+%

Juan Vizcarrondo, Jose Aguilar, Ernesto Exposito, and Audine Subias

32. Domain Analysis Unified Process integrating Quality Standards, Aspect and Goal Orientations^{.....}&, % Irma Pacilli, Francisca Losavio, and Alfredo Matteo

33.Evaluation of an Implementation Guide for an IT Standard Using Surveys ^{....}& '

Adrian Lara and Marcelo Jenkins

34. Evolution of the Computing Curricula for Computer Science in Latin America 2013^{......}' \$)

Ernesto Cuadros Vargas, Yosly Hernández Bieliukas, Antonio Silva Sprock, Cesar Collazos, and Danet Delgado Castillo

- **35. Evolutionary games and the evolution of cooperation W** Rocío Botta, Gerardo Blanco, and Christian Schaerer
- **36. Experiences on Fuzzy DBMS: Implementation and use ***** Ana Aguilera, Livia Borjas, Rosseline Rodríguez, and Leonid Tineo
- 37. Goal Oriented Techniques and Methods: Goal Refinement and Levels of Abstraction ''''''' (

Mayela Delgado, Francisca Losavio, and Alfredo Matteo

38.Graph Modelling of a Refactoring Process for Product Line Architecture Design^{.....} (*

Francisca Losavio, Oscar Ordaz, Nicole Levy, and Anthony Baiotto

- **39. GRiNGA: A Service-oriented Middleware for Interactive TV Grids**), Sebastião E. Alves Filho and Claudia Ribeiro
- 40. Heterogeneous Integration Platform based on free software: Virtual Campus of the University of Nueva Esparta^{……}'*) Wilpia Flores, Nelly Meléndez, Héctor Hernández, and Luis Coelho
- 41. Hierarchical Control of Focus and Input Events in Hypermedia Applications + +

Marcio Moreno and Luiz Fernando Gomes Soares

42. Improve Spreading Activation Algorithm Using Link Assessment Between Actors from a Mobile Phone Company Network Based on SMS Traffic^{......}, '

Aldo Perinetto, Wilfrido Inchaustti, Luca Cernuzzi, and Mario Bort

- **43. Improving Object Extraction With Depth-Based Methods' %** Fabian Prada, Leandro Cruz, and Luiz Velho
- 44.Innovation Management in Software: Case Studies from the Costa Rican Software Development Industry^{……}(\$\$ Ariella Quesada and Francisco J. Mata
- 45. Integrated curriculum based on projects: Opportunities and Constraints A Case Study in Systems Engineering(\$* Sonia Mora and Mayela Coto
- 46. Integrating the Methodological Frameworks WATCH and SCRUM A Method Engineering Approach (%) Judith Barrios Albornoz and Jonás Montilva
- 47. Integration of IHC techniques in software processes based on a model of process improvement^{.....}(&* Natércia Nogueira and Elizabeth Furtado
- **48. Interpretative Ontology: Supervision and Diagnostic** (' (Taniana J Rodríguez, Jose Aguilar, Addison Rios, Francklin Rivas, and Audine Subias

49.Lessons learned with supervisioned internships in Teaching degree Computer Science: Looking for Computer Science educators for basic education.^{.....}((*

Pasqueline Dantas Scaico and Thaise Kelly Costa

50.Load balancing on a cluster computing based in the Routh-Hurwitz criterion^{.....}()&

Aquiles Barreto and Yudith Cardinale

51. Local Search Heuristics for the Flowshop Sequence Dependent Group Scheduling Problem^{.....}(*'

Nilson Felipe Matos Mendes, Jose Elias Claudio Arroyo, and Harlem Mauricio Madrid Villadiego

52. Mathematical morphology for counting Trypanosoma cruzi amastigotes (+\$

José Luis Vázquez Noguera, Horacio Legal Ayala, Christian E. Schaerer, and Miriam Rolón

- **53. Mediation and Graph Data Models for Medical Data Integration (', &** Maria Constanza Pabón, Guillermo Andrés Montoya, and Marta Millán
- 54. MeRinde process model adaptation with Requirements Engineering techniques supported by Free Software tools (-% Carmen Salazar, Francisca Losavio, and Alfredo Matteo
- 55. Methodology for detecting the feasibility of using data mining in an organization^{....}) \$'

Jose Aguilar, Mariela Cerrada, Junior Altamiranda, Fannia Pacheco, and Carlos Rangel

56. Mobile Course: Development of a Mobile App to Access University Courses Information ?.....) %

Mario Chacón and Cesar Garita

- **57. Multi-agent Geosimulation for a Water distribution System ******) & Virginia Padilla Sifontes and Jacinto Dávila
- **58.On the performance and use of spatial OLAP tools**.....)'' Renata Bianchi, Guilherme Hatano, and Thiago Siqueira
- 59. Ontology and Semantic Wiki for an Intangible Cultural Heritage Inventory.....)()

Renzo Stanley and Hernán Astudillo

60.Optical Multicast with Protection against Node Failure. An approach based on MOACO^{.....}))+

Aditardo Vázquez, Diego Pedro Pinto Roa, and Enrique Dávalos

61.Patient identification using biometric systems at the Hospital de Clínicas^{.....})**

Roberto Cristaldo, Cynthia Villalba, Ellen Méndez, and Guillermo González

- 62. Real-Time Diffuse Global Illumination based on Voxelization ()+) Francisco Sans and Esmitt Ramírez
- 63.RED + iC: creating a Knowledge Model to support subject learning Structured Data Types^{.....}), + Yusneyi Carballo Barrera
- 64. Refactoring Java code by transformation rules in QVT-Relation) * Ariel Gonzalez, Marcelo Ariel Uva, and Mariana Frutos

65. Robust Network Design under Uncertain Taffic. An approach based on Genetic Algorithm^{……}* \$)

Brenda Diaz-Báez, Diego P. Pinto-Roa, and Christian von Lücken

- 66. Spatial Data Warehouses and SOLAP Using Open-Source Tools **** % Leonardo Pandolfi and Diana Bogantes
- 67.Sphere Intersection Algorithms for Molecular Distance Geometry Problem^{·····*} &)

Clarice Santos, Rosiane de Freitas, and Mario Salvatierra

- 68. Stability of p-Cycles in WDM Optical Networks with Dynamic Traffic: A Multi-objective Approach^{***} & Francisco Mendoza, María Mercedes Melián, Enrique Dávalos, and Christian Von Lücken
- **69. Standard Quality Model to Enterprise Architecture Support Tools** Javier Escobar, Francisca Losavio, and Dinarle Ortega
- **70. Study and characterization of storage device traces for determining the presence of selfsimilar model**^{.....*})% Armando Borrero and Carlos Quintero
- **71. Towards a data quality model for open data portals**^{……*}**),** Edgar Oviedo, Jose Norberto Mazon, and Jose Jacobo Zubcoff
- 72. Towards a model for the development and assessment of competencies through formative projects^{******} Sergio Cardona, Jeimy Vélez, and Sergio Tobón
- 73. Towards a model-driven approach for promoting Cloud PaaS Portability^{.....*}+*

Elias Silva, Daniel Lucrédio, Victor Silva, and Renata Fortes

- **74. Usability Test for Augmented Reality Applications** ,)** Valéria Martins, Ana Grasielle Correa, and Marcelo Guimarães
- 75. Usage and Limitations of Free and Open-Source Software in Costa Rican Local Governments^{.....*}-) Francisco J. Mata and Ariella Quesada
- 77. Virtual Machine Placement. A Multi-Objective Approach **** +% Fabio López, Elias Melgarejo, and Benjamín Barán

Irenio Luis Chagua Aduviri, Yalmar Ponce Atencio, Jose Eduardo Aldo Valdivia Velázquez, Zulema Lilian Mamani Huacani, and Luz Delia Calsin Ramos