

# **2015 34th International Conference of the Chilean Computer Science Society (SCCC 2015)**

**Santiago, Chile  
9 – 13 November 2015**



**IEEE Catalog Number: CFP15139-POD  
ISBN: 978-1-4673-9818-3**

**Copyright © 2015 by the Institute of Electrical and Electronic Engineers, Inc  
All Rights Reserved**

*Copyright and Reprint Permissions:* Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

***\*\*\*This publication is a representation of what appears in the IEEE Digital Libraries. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP15139-POD
ISBN (Print-On-Demand):	978-1-4673-9818-3
ISBN (Online):	978-1-4673-9817-6
ISSN:	1522-4902

**Additional Copies of This Publication Are Available From:**

Curran Associates, Inc  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: (845) 758-0400  
Fax: (845) 758-2633  
E-mail: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

CURRAN ASSOCIATES INC.  
**proceedings**  
.com

# TABLE OF CONTENTS

<b>WORST-CASE OPTIMAL INCREMENTAL SORTING .....</b>	<b>1</b>
<i>E. Regla ; R. Paredes</i>	
<b>MACHINE-PART CELL FORMATION PROBLEMS WITH CONSTRAINT PROGRAMMING .....</b>	<b>7</b>
<i>R. Sotoyz ; B. Crawford ; B. Almonacid ; F. Paredes ; E. Loyola</i>	
<b>A CHOICE FUNCTIONS PORTFOLIO FOR SOLVING CONSTRAINT SATISFACTION PROBLEMS: A PERFORMANCE EVALUATION.....</b>	<b>11</b>
<i>R. Soto ; B. Crawford ; R. Olivares</i>	
<b>ACO AND GA METAHEURISTICS FOR ANOMALY DETECTION.....</b>	<b>17</b>
<i>A. H. Hamamoto ; L. F. Carvalho ; M. L. Proenca</i>	
<b>UNDERSTANDING THE DESIGN OF SOFTWARE DEVELOPMENT TEAMS FOR ACADEMIC SCENARIOS .....</b>	<b>23</b>
<i>L. Silvestre ; S. F. Ochoa ; M. Marques</i>	
<b>A MULTI-GPU APPROACH FOR THE EXCHANGE MONTE CARLO METHOD .....</b>	<b>29</b>
<i>C. A. Navarro ; H. Wei ; Y. Deng</i>	
<b>JSPIRIT: A FLEXIBLE TOOL FOR THE ANALYSIS OF CODE SMELLS.....</b>	<b>35</b>
<i>S. Vidal ; H. Vazquez ; J. A. Diaz-Pace ; C. Marcos ; A. Garcia ; W. Oizumi</i>	
<b>TOWARDS AUTOMATIC DOCUMENT CLASSIFICATION BY EXPLOITING ONLY KNOWLEDGE RESOURCES .....</b>	<b>41</b>
<i>G. A. Cardoso da Silva ; C. F. Dorneles</i>	
<b>DEVisING A CONFLICT DETECTION METHOD FOR MULTI-PARTY CONTRACTS.....</b>	<b>47</b>
<i>W. A. Della Mura ; A. L. Bonifacio</i>	
<b>CODE DUPLICATION IN ROS LAUNCHFILES .....</b>	<b>53</b>
<i>P. Estefo ; R. Robbes ; J. Fabry</i>	
<b>IDENTIFYING THE DATA QUALITY TERMINOLOGY USED BY BUSINESS PEOPLE .....</b>	<b>59</b>
<i>L. Ortega-Ruiz ; A. Caro ; A. Rodriguez</i>	
<b>INTEGRATION AND IMPLEMENTATION OF AN EA STRATEGY BASED OPERATING MODEL WITH BPM TECHNOLOGY - CASE STUDY: HOUSING CREDIT PROCESS, BANCO ESTADO ECUADOR.....</b>	<b>67</b>
<i>N. R. Salazar ; B. H. Heyl</i>	
<b>ADAPTING THE PBEC-OTSS SOFTWARE SELECTION APPROACH FOR BPM SUITES: AN APPLICATION CASE.....</b>	<b>75</b>
<i>M. Gallego D ; F. D. Giraldo ; B. Hipassy</i>	
<b>FROM THE DARK NET TO THE CLOUDY DATA - CLOUD NETWORK GOVERNANCE GUIDELINES .....</b>	<b>85</b>
<i>A. C. Oliveira ; P. Dora ; M. Spohn ; K. Oliveira</i>	
<b>SEVATAX: SERVICE TAXONOMY SELECTION &amp; VALIDATION PROCESS FOR SPL DEVELOPMENT .....</b>	<b>93</b>
<i>M. Pol'la ; A. Buccella ; M. Arias ; A. Cechich</i>	
<b>IDENTIFYING EMERGING SECURITY CONCEPTS USING SOFTWARE ARTIFACTS THROUGH AN EXPERIMENTAL CASE .....</b>	<b>99</b>
<i>G. Marquez ; P. Silva ; R. Noel ; S. Matalonga ; H. Astudillo</i>	
<b>PERFORMANCE COMPARISON SLOWLY CHANGING DIMENSIONS USING MODEL RELATIONAL AND OBJECT-RELATIONAL .....</b>	<b>105</b>
<i>A. U. Sepulveda ; R. C. Loyola ; M. W. Hernandez</i>	
<b>JPI FEATURE MODELS - EXPLORING A JPI AND FOP SYMBIOSIS FOR SOFTWARE MODELING .....</b>	<b>111</b>
<i>C. V. Silva ; J. A. Galindo ; R. Villarroel ; D. Benavides ; P. Leger ; S. Valenzuela</i>	
<b>USING A COPROCESSOR TO SOLVE THE ANT COLONY OPTIMIZATION ALGORITHM.....</b>	<b>117</b>
<i>F. Tirado ; A. Urrutia ; R. J. Barrientos</i>	
<b>A THREE-LAYER APPROACH FOR PROTECTING SMART-CITIZENS PRIVACY IN CROWDSENSING PROJECTS .....</b>	<b>123</b>
<i>S. Blasco ; J. Bustos-Jimenez ; G. Font ; A. Hevia ; M. Grazia Prato</i>	
<b>MIUZ: MEASURING THE IMPACT OF DISCONNECTING A NODE .....</b>	<b>128</b>
<i>I. Bachmann ; P. Reyes ; A. Silva ; J. Bustos-Jimenez</i>	
<b>BE CITY: SENSIBILITY AND SENSIBILITY ON URBAN CYCLING FOR SMARTER CITIES .....</b>	<b>134</b>
<i>S. Torres ; F. Lalanne ; G. del Canto ; F. Morales ; J. Bustos-Jimenez ; P. Reyes</i>	

<b>SPIN LOCK KILLED THE PERFORMANCE STAR</b> .....	138
<i>D. Rivera ; S. Blasco ; J. Bustos-Jimenez ; J. Simmonds</i>	
<b>SERIOUS VIDEOGAMES FOR HERITAGE'S APPROPRIATION</b> .....	144
<i>M. I. V. Caicedo ; M. C. C. Ojeda ; P. D. B. Ceron ; H. F. Munoz ; V. H. A. Echavarria</i>	
<b>MALWARE ON MOBILE DEVICES ODDS OF INFECTION BASED ON RUNNING OPERATING SYSTEM VERSION</b> .....	150
<i>C. C. Barragan ; C. B. Huidobro ; M. P. Esquivel</i>	
<b>USING SEQUENTIAL APPROXIMATE OPTIMIZATION AND A GENETIC ALGORITHM TO CALIBRATE AGENT-BASED MODELS</b> .....	157
<i>R. Borquez ; E. Canessa ; C. Barra ; S. Chaigneau</i>	
<b>BUILDING AN IOT-AWARE HEALTHCARE MONITORING SYSTEM</b> .....	163
<i>F. Jimenez ; R. Torres</i>	
<b>OPTIMIZATION SLOWLY CHANGING DIMENSIONS OF A DATA WAREHOUSE USING OBJECT-RELATIONAL</b> .....	167
<i>R. C. Loyola ; A. U. Sepulveda ; M. W. Hernandez</i>	
<b>TOWARDS TO RESPONSIVE WEB SERVICES FOR SMART HOME LED CONTROL WITH RASPBERRY PI. A FIRST APPROACH.</b> .....	173
<i>C. Cheuque ; F. Baeza ; G. Marquez ; J. Calderon</i>	
<b>Author Index</b>	