

2010 11th Symposium on Computing Systems

(WSCAD-SCC 2010)

**Petropolis, Brazil
27-30 October 2010**



IEEE Catalog Number: CFP1074L-PRT
ISBN: 978-1-4244-8974-9

2010 11th Symposium on Computing Systems

WSCAD-SCC 2010

Table of Contents

Conference Organization	viik
Message from General Chairs	00.....kz
Mensagem dos Coordenadores Gerais	0x
Message from Program Chairs	xk
Mensagem dos Coordenadores do Comitê de Programa	xik
Program Committee and Reviewers	xiik
Brazilian Computer Society	0.....xv

Parallel Algorithms

Parallel Routing Algorithm for Extra Level Omega Networks on Reconfigurable Systems	1
---	---

Julio C. Goldner Vendramini and Ricardo Ferreira

A Proposal of Parallelization of Local Search Procedures Applied to the Minimum Cost Hop-and-Root Constrained Forest Problem	9
--	---

D.L. Pereira, A.S. Cunha, and W. Meira Jr.

Simulation of the Foreground-Background Queue in Parallel Systems	17
---	----

Alexandre Magno de Sousa and Cristina Duarte Murta

Influence of Communication Models on the Scalability of Master-Slave Platforms Running Bag-of-Tasks Applications	25
---	----

Hermes Senger, Fabricio A.B. da Silva, and Luciano J. Miranda Filho

Computer Architecture

Optimizing a Retargetable Compiled Simulator to Achieve Near-Native Performance	33
---	----

Maxiwell Salvador Garcia, Rodolfo Azevedo, and Sandro Rigo

Advanced SS: A Superscalar Simulator with Support for Operating System	40
--	----

Eduardo H.M. Cruz and Ronaldo A.L. Gonçalves

Hardware Accelerator for Dictionary-Based Compression of MMP Algorithm	48
<i>Vanderson de L. Reis, Edward David Moreno, and Murilo B. de Carvalho</i>	

D-Power: A VHDL Dynamic Power Estimation Tool for Superscalar Architectures - Cache Hierarchy and Fetch Stage	56
<i>Renata C. Lopes da Silva and Ronaldo A.L. Gonçalves</i>	

Computer Architecture and Grid Computing

NSGAII Applied to Unified Second Level Cache Memory Hierarchy Tuning Aiming Energy and Performance Optimization	64
<i>F.R. Cordeiro and A.G. e Silva-Filho</i>	

Process Mapping Based on Memory Access Traces	72
<i>Eduardo H.M. Cruz, Marco A.Z. Alves, and Philippe O.A. Navaux</i>	

Implementation of Techniques for Fault Tolerance in a Network-on-Chip	80
<i>Fabrício Veiga and Cesar Albenes Zefirino</i>	

Scheduling Strategies Evaluation for Opportunistic Grids	88
<i>Berto de Tárcio Pereira Gomes, Gilberto Cunha Filho, Igor Ramos Campos, Jesseildo Figueiredo Gonçalves, and Francisco José da Silva e Silva</i>	

Ubiquitous Computing

A Model to Explore Business Opportunities in Ubiquitous Environments	96
<i>Laerte Franco, João Rosa, Jorge Barbosa, Cristiano Costa, and Adenauer C. Yamin</i>	

A Model of Autonomous Control of the Adaptation to the Context in UbiComp	104
<i>Nelsi Warken, Adenauer Yamin, João L.B. Lopes, Renato Dilli, Luthiano Venecian, and Sérgio Rodrigues</i>	

Ubiservices: A Connectivity Model to Ubiquitous Environments	112
<i>Gustavo B. Brand, Alex Garzão, Jorge L.V. Barbosa, and Rafael Ávila</i>	

An Architecture with Support Semantic for Discovery Resources in Ubiquitous Computing	120
<i>Renato Dilli, Luthiano Venecian, Sérgio Rodrigues, Adenauer Yamin, and Nelsi Warken</i>	

Applications

Distributed Quantum Simulation on the VPE-qGM Environment	128
<i>Adriano K. Maron, Anderson B. Pinheiro, Renata H.S. Reiser, and Maurício L. Pilla</i>	
A Quantum Circuit for the Brazilian Decimetric Array (BDA) Signal Correlation	136
<i>Renato de O. Violin, José Hiroki Saito, and Hanumant Shankar Sawant</i>	
Improving Ray Tracing Anti-aliasing Performance through Image Gradient Analysis	144
<i>João Marcelo X.N. Teixeira, Eduardo S. Albuquerque, Artur L. dos Santos, Veronica Teichrieb, and Judith Kelner</i>	
ShareD-GM: Distributed Memory Architecture for the D-GM Environment	152
<i>Gustavo Zechlinski, Anderson Pinheiro, Renata Reiser, and Adenauer Yamin</i>	
Author Index	160