

International Conference on High Performance Computing Systems 2010

(HPCS 2010)

**Orlando, Florida, USA
12-14 July 2010**

Editors:

**Kamal Alameh
Leonid B. Sokolinsky**

Chao-Tung Yang

ISBN: 978-1-61782-066-3

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2010) by the International Society for Research in Science and Technology
All rights reserved.

Printed by Curran Associates, Inc. (2011)

For permission requests, please contact the International Society for Research in Science and Technology
at the address below.

ISRST (public relations)
PO Box 2464
Tallahassee, FL 32316 - 2464
USA

isrst@isrst.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

Contents

Set-Associative Load/Store Caches.....	1
Jia-Jhe Li, Yuan-Shin Hwang	
On the Reliability of SiC Devices.....	9
Ali M. Darwish, H. Alfred Hung	
Locality-Conscious Superpaging for Improved TLB Behavior of Stencil Computations.....	13
Apan Qasem	
Design of a Least Distance Protocol in MANET Using Search Techniques.....	19
Radia A. Wahab, Khondker S. Hasan, Monawwar M. Sohul, Abul L. Haque	
Object Oriented Combinatory Parser.....	25
Meysam Naseri, Maryam Izadi	
Query Performance Analysis of Database Objects on Hard Disks and Flash SSDs.....	33
Seonghoon Kim, Sang-Won Lee	
DSP Specific, Optimization Strategy for the Implementation of Viterbi Decoder.....	38
Yame Asfia, Muhammad Younis Javed, Muid-ur-Rahman Mufti	
Practical Implementation Issues of Optimum Adaptive Algorithms with Individualized and Time Varying Convergence Factors.....	44
Thomas Yang	
A New Method for Warehousing Assessment and Prioritize Activities.....	48
Mehrshid Javanbakht, Maryam Pourkamali, Jaafar Habibi	
High Performance Computing with Graphics Cards to Accelerate Processing Density Functional Theory.....	55
Cleomar Pereira da Silva, Marco Aurélio Cavalcanti Pacheco, Omar Paranaiba Vilela Neto	
Current Trends and the Future of Software-Managed On-Chip Memories in Modern Processors.....	63
Shahid Alam, R.Nigel Horspool	
A Computational Framework for Modeling Time-Frequency Distributions	71
Cesar Aceros, Marisel Villafane, Domingo Rodriguez	

High-Precision Numerical Simulations of Rotating Black Holes Accelerated by CUDA.....	78
Rakesh Ginjupalli, Gaurav Khanna	
The P-C-FGA Optimization Method of Navigation Performance and Structure Characteristic of the High-Speed Monohull Ship.....	84
Yang Songlin, Yang Zhaolong, He Yi-jia, Li Mi	
Tool for Automated Generation of MPI Datatypes.....	92
Andreas Schäfer, Dietmar Fey, Adrian Knoth	
FPGA Implementation of Modified Genetic Algorithm for Six Phase code Design.....	97
N.Balaji, K.Subba Rao	