2017 IEEE 19th International Conference on High Performance Computing and Communications Workshops (HPCCWS 2017)

Bangkok, Thailand 18-20 December 2017



IEEE Catalog Number: ISBN: CFP17P83-POD 978-1-5386-5931-1

Copyright © 2017 by the Institute of Electrical and Electronics 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 is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.

IEEE Catalog Number:	CFP17P83-POD
ISBN (Print-On-Demand):	978-1-5386-5931-1
ISBN (Online):	978-1-5386-5930-4

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 Web: www.proceedings.com



2017 IEEE International Conference on High Performance Computing and Communications Workshops HPCCWS 2017

Table of Contents

reface vii	
Committees viii	

M2A2 2017 Papers

Portable and Vendor-Independent Low-Level Programming and Performance Benchmarking for Graphics Cards and Processors .1
University Frankfurt) A Hybrid Parallel Genetic Algorithm with Dynamic Migration Strategy Based on Sunway Many-Core
Yao Liu (East China Normal University), Ruixiang Zhao (East China Normal University), Kai Zheng (East China Normal University), Su Wang (East China Normal University), Yan Liu (East China Normal University), Huanxue Shen (East China Normal University), and Qianhao Zhou (East China Normal University)
A Framework for WAN Optimization and Data Center Selection Using NaaS .16 Yélognissè Christèle Hounnontin (École de Technologie Supérieure) and Zbigniew Dziong (École de Technologie Supérieure)
Parallel Grouping Particle Swarm Optimization with Stream Processing Paradigm .22 Kun Ma (University of Jinan), Shuhui Liu (University of Jinan), Yongzheng Lin (University of Jinan), Ziqiang Yu (University of Jinan), and Ke Ji (University of Jinan)
 Finding Hierarchical Network Model in Insulin Production Process .27. Marjan Ferdousi (Bangladesh University of Engineering and Technology), Suraiya Tairin (BRAC University), Satyajit Podder (Bangladesh University of Engineering and Technology), A. B. M. Alim Al Islam (Bangladesh University of Engineering and Technology), and Mahmuda Naznin (Bangladesh University of Engineering and Technology)
Efficient Generation of Parallel Spin-images Using Dynamic Loop Scheduling .34 Ahmed Eleliemy (University of Basel), Ali Mohammed (University of Basel), and Florina M. Ciorba (University of Basel)

A Survey and Recommendations for Distributed, Parallel, Single Pass, Incremental Bayesian
Classification Based on MapReduce for Big Data .42
M. Omair Shafiq (Carleton), Yibing Yang (Carleton), and Maryam Fekri
(Carleton)
AWEDF: An Architecture-Aware Execution and Debugging Workflow for a Highly Reliable Chip .50
Yuewei Wang (China University of Geosciences), Qirui Gui (China
University of Geosciences), Meng Wang (China University of
Geosciences), Lizhe Wang (Chinese Academy of Sciences), and Albert Y.
Zomaya (The University of Sydney)
Performance Evaluation of Intel Broadwell Nodes Based Supercomputer Using Computational Fluid
Dynamics and Climate Applications 58
Subhash Saini (NASA Ames Research Center) and Robert Hood (NASA Ames
Research Center)

M2A2 2017 Posters

An Efficient Elasticity Mechanism for Server-Based Pervasive Healthcare Applications in Cloud
Tushar Bhardwaj (IIT Roorkee) and Subhash Chander Sharma (IIT Roorkee)
Thai Sentence Generation Machine Employing Fixed Patterns 70
Watcharapong Krukaset (Rajabhat Rajanakarindra University), Nuchjarin
Krukaset (Rajabhat Rajanakarindra University), and Chouvalit Khancome
(Ramkhamhaeng University)