

# DCABES 2010

10-11 August 2010  
Hong Kong

The 9th International Symposium on Distributed Computing and Applications To Business, Engineering & Science

## Organizers:



WUHAN  
University  
of Technology



YouZone

## Sponsors:

Conference Venue: Lingnan University, Tuen Mun, New Territories, Hong Kong.

## Conference Program

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<u>9 August 2010, Monday</u>		<u>Venues:</u>
08:30-17:30	Check In	MBG11

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<u>10 August 2010, Tuesday</u>		
08:30-08:35	<u>Welcome Remarks</u>	
	<b>Prof T S Chan</b> <i>Acting President and Shun Hing Chair Professor of Marketing Lingnan University</i>	
08:35-08:40	<u>Opening Address</u>	
	<b>Prof Qingping Guo</b> <i>Chair of the Organizer Committee and Professor of Wuhan University of Technology</i>	MBG07
	<u>Keynote Speeches I</u> <i>Chair: Prof Qingping Guo</i>	
08:40-09:25	Energy Efficient Resource Allocation in Large Scale Distributed Systems <i>Prof Albert Y Zomaya, The University of Sydney</i>	
09:25-10:10	On Thousands-core Scale Parallel Numerical Algorithms for Scientific Computing <i>Prof Jiachang Sun, Chinese Academy of Sciences</i>	

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<b>10:10-10:25 Coffee Break</b>		
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	<u>Keynote Speeches II</u> <i>Chair: Prof Choi-Hong Lai</i>	
10:25-11:05	Keynote Speech delivered by Hewlett Packard	MBG07
11:05-11:50	On the Modelling of Complex Systems - Methodologies and Applications <i>Dr. Nicholas Christakis, University of Crete Heraklion</i>	

*Note: All Sessions in MBG01 and MBG19 are concurrent.*

**10 August 2010, Tuesday**

	<u><b>Concurrent Session I</b></u> Chair: Prof Albert Y Zomaya	Venue: MBG01	<u><b>Concurrent Session VII</b></u> Chair: Prof Choi-Hong Lai	Venue: MBG19
14:00-14:25	Design and Simulation of Human Conversational Model for Distributed Systems <i>Souheil Khaddaj</i>		High-Speed Modular Multipliers Based on a New Binary Signed-Digit Adder Tree Structure <i>Mingda Zhang and Shugang Wei</i>	
14:25-14:50	Parallel Computation of Surrogate Models for Potential Energy Surfaces <i>C T Kelley</i>		Batch Scheduler for Personal Multi-Core Systems <i>Simon Chong Wee See</i>	
14:50-15:15	Distributed Management of Scientific Workflows in SWIMS <i>Yan Leng</i>		Residue-Weighted Number Conversion with Moduli Set $\{2^p-1, 2^p+1, 2^{2p}+1, 2^p\}$ Using Signed-Digit Number Arithmetic <i>Changjun Jiang</i>	
15:15-15:40	Extending the Capabilities of Mobile Phones with Multi-Servers <i>Alan Lam</i>		On the Solution of Singular Systems by KRYLOV Subspace Methods <i>Man-Chung Yeung</i>	

**15:40-15:55 Coffee Break**

	<u><b>Concurrent Session II</b></u> Chair: Prof Souheil Khaddaj	Venue: MBG01	<u><b>Concurrent Session VIII</b></u> Chair: Prof Jingwen Cao	Venue: MBG19
15:55-16:20	Web-based Picture Archiving and Communication System for Medical Images <i>Alberto Pastrana Palma</i>		Sparse Matrix-Vector Multiplication Optimizations based on Matrix Bandwidth Reduction using NVIDIA CUDA <i>Shiming Xu</i>	
16:20-16:45	Study on Sand-dust Model Coupled with PSU/NCAR Mesoscale Model and Its Application in Northeast Asia <i>Jinrong Jiang</i>		Prediction of Water-quality based on Wavelet Transform using Vector Machine <i>Peijun Chen</i>	
16:45-17:10	ScGridBroker: An Open Grid Resource Scheduler based on Economic Scheduling Algorithms <i>Qianli Zhong</i>		Kernelized Fuzzy Fisher Criterion based Clustering Algorithm <i>Su-Qun Cao</i>	
17:10-17:35	Protein Sequence Predicted by Using Parallel CRF Method based on Backbone Angle <i>Shaoping Chen</i>		A Churn Model based on the Global Geographical Distribution of Nodes <i>Yun Li</i>	
17:35-18:00	The Implementation and Comparison of Two Kinds of Parallel Genetic Algorithm Using Matlab <i>Pengdong Gao</i>		A Parallel PCG Solver Based on OpenMP for Three-dimensional Heat Equation <i>Dandan Li</i>	

**18:30 Conference Dinner**

**Venue: TBC**

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**11 August 2010, Wednesday**

	<b><u>Concurrent Session III</u></b> Chair: Prof Achilles Vairis	Venue: MBG01	<b><u>Concurrent Session IX</u></b> Chair: Prof Fahad Fazal Elahi Guraya	Venue: MBG19
08:00-08:25	Basket Option Pricing Using GP-GPU Hardware Acceleration <i>Craig C Douglas</i>		Predictive Saliency Maps for Surveillance Videos <i>Fahad Fazal Elahi Guraya</i>	
08:25-08:50	Semantics Enhanced Composition Planner for Distributed Resources <i>Yan Leng</i>		Locating the Centre Line of Paddle Vats for Cutting Wafer Images by Using Binary Segmentation <i>Meiqing Wang</i>	
08:50-09:15	Computational Modeling of Large Wildfires: A Roadmap <i>Janice Coen</i>		Algorithm on Contourlet Domain in Detection of Road Cracks for Pavement Images <i>Zhibiao Shu</i>	
09:15-09:40	Increasing Client Satisfaction: Request scheduling for Information Service <i>Qianli Zhong</i>		A High Performance Image-Spam Filtering System <i>Wen-Liang Tsao</i>	

**09:40-09:55 Coffee Break**

	<b><u>Concurrent Session IV</u></b> Chair: Prof Craig C Douglas	Venue: MBG01	<b><u>Concurrent Session X</u></b> Chair: Prof Meiqing Wang	Venue: MBG19
09:55-10:20	Modelling a knee ligament repair device <i>Achilles Vairis</i>		A Parallel Clustering Ensemble Algorithm for Intrusion Detection System <i>Hongwei Gao</i>	
10:20-10:45	Research on soil moisture sensor node and placement for distributed sensor network <i>Songhua Yan</i>		Large Space Fire Detection in Laboratory-scale based on Color Image Segmentation <i>Qiang Wang</i>	
10:45-11:10	Provision of QoS for Grid Enabled Service Oriented Architectures <i>Eric Oppong</i>		Potholes Detection Based on SVM in the Pavement Distress Image <i>Jin Lin</i>	
11:10-11:35	Parallel Algorithm and its Application of a Nonhydrostatic Semi-implicit Semi-Lagrangian Global Model <i>Xiangjun Wu</i>		Research on Moving Vehicle Detection in the Presence of Occlusion <i>Hengjun Yue</i>	
11:35-12:00	Parallel Implementation of Mesh Simplification on a Beowulf Cluster <i>Yongquan Lu</i>		Video Object Tracking Method Based on Normalized Cross-correlation Matching <i>Jian Wu</i>	

**12:00-14:00 Lunch**

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	<u><b>Concurrent Session V</b></u> Chair: Prof Manfred Liebmann	Venue: MBG01	<u><b>Concurrent Session XI</b></u> Chair: Prof Wenbao Xu	Venue: MBG19
14:00-14:25	A Brokerage Framework for Intelligent Resource Allocation in Distributed Systems <i>Veit H Nguyen</i>		Mobile Node Localization Algorithm in Wireless Sensor Networks for Intelligent Transportation Systems <i>Jie Luo</i>	
14:25-14:50	Large Scale Simulations of the Euler Equations on GPU Clusters <i>Manfred Liebmann</i>		Model of Traffic Path Choice based on Game theory and Induction Mechanism <i>Xinquan Li</i>	
14:50-15:15	Data Processing in Space Weather Physics Models in the Meridian Project <i>Sun-gen Deng</i>		A QoS Multicast Routing Algorithm Based on Genetic Algorithm of Game Selection <i>Niansheng Chen</i>	
15:15-15:40	On the Application of Educational Information Resource Base on Cloud Computing <i>Jiejing Cheng</i>		A Novel Speculative Multithreading Parallelization Method in Chip Multiprocessor Systems <i>Hongbin Yang</i>	

**15:40-15:55 Coffee Break**

	<u><b>Concurrent Session VI</b></u> Chair: Prof Veit H Nguyen	Venue: MBG01	<u><b>Concurrent Session XII</b></u> Chair: Prof Alfred Loo	Venue: MBG19
15:55-16:20	Parallel M-tree Based on Declustering Metric Objects using K-medoids Clustering <i>Qiu Chu</i>		An Incomplete Information Game Routing Model for Wireless Multimedia Sensor Networks <i>Xiaoshan Guo</i>	
16:20-16:45	The Design and Implement of Memory Manager in STM <i>Ping Zhang</i>		The Autonomic Model in Remote Sensing Data Processing System <i>Ziyang Li</i>	
16:45-17:10	The Applications and Trends of High Performance Computing in Finance <i>Hong Li</i>		Study on the Model of Demand Forecasting Based on Artificial Neural Network <i>Ying Zhu</i>	
17:10-17:35	Parallel Model of Forecasting Killer Residence and Place of Crime <i>Jing Qu</i>		Design and Application of Banking Business Automatic Monitoring System Based on IPMSG <i>Jifang An</i>	
17:35-18:00	-		Future Innovation-oriented Development of Electronics and Information Industry Policy: Considering on the Basis of International Financial Crisis <i>Xuehua Bin</i>	