PDCAT

December 8 (Tue)

Registration: 12:30–18:00

13:00–14:00	Room A	Keynote1

The Role of Functional Memories in Parallel Information Processing
with Localized and Distributed Systems

Break

14:20–16:00	Room A	Tutorial1

Theoretical Aspects of Autonomous Mobile Robots

Room C Tutorial2

Queue Machines: an unknown alternative

Break

16:20–18:00	Room A	Tutorial1

Theoretical Aspects of Autonomous Mobile Robots

Room C Tutorial3

Methodologies and Performance Impacts of General Purpose Computing on GPUs

December 9 (Wed)

Registration: 8:30–18:00

9:00–9:15	Room A	Opening
9:15–10:15	Room A	Keynote2

Pains and Challenges in the Mobile Internet Evolution

Break

10:35–11:50   Room A

1A. Algorithms (1)   Yamin Li (Hosei University)

Marc Moreno Maza and Yuzhen Xie.
Balanced Dense Polynomial Multiplication on Multi-cores

Pascal Bolzhauser, Anthony Sulistio, Gerhard Angst and Christoph Reich.
Parallelized Critical Path Search in Electrical Circuit Designs

Fabio Bellavia, Marco Cipolla, Domenico Tegolo and Cesare Valenti
An Evolution of the non-parameter Harris Affine Corner Detector: a Distributed Approach

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Room B

1B. Storage Systems   Yuichi Tsujita (Kinki University)

Liang Cao, Yu Wang and Jin Xiong.
Building Highly Available Cluster File System Based on Replication

Giovanni Agosta, Alessandro Barenghi, Fabrizio De Santis, Andrea Di Biagio
and Gerardo Pelosi.
Fast Disk Encryption Through GPGPU Acceleration

Junwei Zhang, Jingliang Zhang, Jiangang Zhang, Xiaoming Han and Lu Xu.
A Novel Metadata Management Architecture Based on Service Separation
in Cluster File System

Room C

1C. Service Oriented Architecture, Language   Hiroyuki Sato (University of Tokyo)

Xiaoyi Lu, Yongqiang Zou, Fei Xiong, Jian Lin and Li Zha.
ICOMC: Invocation Complexity Of Multi-language Clients
for Classified Web Services and its Impact on Large Scale SOA Applications

Kazuma Kadowaki and Satoshi Fujita.
A Dynamic User Management in Networked Consumer Electronics
via Authentication Proxies

Tobias Schuele.
A Coordination Language for Programming Embedded Multi-Core Systems

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Lunch

12:50–14:30 Room A

> ## 2A. Scheduling
> Shi-Jinn Horng (National Taiwan University of Science and Technology)
>
> Fukuhito Ooshita, Tomoko Izumi and Taisuke Izumi.
> A Generalized Multi-Organization Scheduling on Unrelated Parallel Machines
>
> Da-Ren Chen, Tasi-Duan Lin and Shu-Ming Hsieh.
> A Transition-Aware DVS Method for Jitter-Controlled Real-Time Scheduling
>
> Mu Xu, Hong An, Gu Liu, Yaobin Wang, Guang Xu, Ping Yao, Xiurui Hao, and Wenting Han
> The Mapping Framework and Optimizing Strategy for Block Cryptography
> on Cell Broadband Engine

Room B

> ## 2B. Parallel Systems
> Tomoaki Tsumura (Nagoya Institute of Technology)
>
> Yuanming Zhang, Kanemitsu Ootsu, Takashi Yokota and Takanobu Baba.
> Clustered Software Queue for Efficient Pipelined Multithreading
>
> Guang Suo and Xue-jun Yang.
> Cache Partitioning on Chip Multi-processors for Balanced Parallel Scientific Applications
>
> Wei SUN.
> A Novel Genetic Admission Control for Real-Time Multiprocessor Systems

Room C

> ## 2C. Network Computing, Peer-to-Peer
> Yoshiaki Katayama (Nagoya Institute of Technology)
>
> Hiroo Kitamura and Satoshi Fujita.
> A Biased k-Random Walk to Find Useful Files in Unstructured Peer-to-Peer Networks
>
> Lei Ni and Aaron Harwood.
> P2P-Tuple: Towards a Robust Volunteer Computing Platform
>
> Jian Ye, Jintao Li and Zhenmin Zhu.
> Ubiquitous Computing-Oriented Distributed Fuzzy Reasoning Petri Net Modeling
> and Simulation

Break

14:50–16:30 Room A

> ## 3A. Interconnection Networks
> Fkuhito Ooshita (Osaka University)
>
> Yamin Li, Shietung Peng and Wanming Chu.
> Disjoint-Paths and Fault-Tolerant Routing on Recursive Dual-Net
>
> Antoine Bossard, Keiichi Kaneko and Shietung Peng.
> Node-to-set Disjoint-path Routing in Metacube
>
> Ming-Chien Yang.
> Node-Pancyclicity of Faulty Twisted Cubes
>
> Ming-Chien Yang.
> Conditional Fault-Tolerant Cycle Embedding of Star Graphs

Room B

3B. Performance Optimization
Kanemitsu Ootsu (Utsunomiya University)

Juan Gonzalez Garcia, Judit Gimenez and Jesus Labarta.
Automatic evaluation of the computation structure of parallel applications

Juan Angel Lorenzo, Petr Tuma, Juan Carlos Pichel and Francisco F. Rivera.
On the Influence of Thread Allocation for Irregular Codes in NUMA Systems

Zhenhan Liu, Xiaoxuan Meng and Lu Xu.
Performance Optimization Under Small Files Intensive Workloads in BWFS

Yushi KAMIYA, Tomoaki TSUMURA, Hiroshi MATSUO and Yasuhiko Nakashima.
A Speculative Technique for Auto-Memoization Processor with Multithreading

Room C

3C. Security, Reliability
Xavier Defago (JAIST)

Yidong Li and Hong Shen.
Equi-Width Data Swapping for Private Data Publication

Shi-Jinn Horng, Yuan-Hsin Chen, Ray-Shine Run, Rong-Jian Chen, Jui-Lin Lai
and Kevin Octavius Sentosa.
An Improved Score Level Fusion in Multimodal Biometric Systems

Wang Zhiyuan and Yang Xuejun.
Reliability Speedup: An Effective Metric for Parallel Application with Checkpointing

Gopinatha Jakadeesan and Dhrubajyoti Goswami.
A Classification-Based Approach to Fault-Tolerance Support in Parallel Programs

Break

16:50-18:05   Room A

4A. Algorithms (2)
Ming-Chien Yang (Aletheia University)

Shihong Xu and Hong Shen.
A Distributed (|R|,2)-Approximation Algorithm for Fault-Tolerant Facility Location

Junya Nakamura, Tadashi Araragi and Shigeru Masuyama.
Acceleration of Byzantine Fault Tolerance by Parallelizing Consensuses

Khaled Almi'ani, Javid Taheri and Anastasios Viglas.
A Data Caching Approach for Sensor Applications

Room B

4B. Communication
Wei Sun (NEC)

SingLing Lee, JungChun Liu and Hann-Jang Ho.
Scalable Multi-hop Scheduling with Overlapping the Tuning Latency
in WDM Optical Star Networks

Yu Jiang, Yuhong Zhao, Jian Ren and Binxing Fang.
Using Mixed and Hybrid TCP Probe methods for Forward IP Paths Inference

Risto Honkanen.
Lambda-Systolic Routing in a Wavelenght-Division Multiplexed All-Optical Butterfly

Room C

4C. Programming Environment   Tobias Schuele (Siemens AG)

Kai-Cheung Leung, Zhiyi Huang, Qihang Huang and Paul Werstein.
Maotai 2.0: Data Race Prevention in View-Oriented Parallel Programming

Hiroyuki Sato.
Idiom Recognition and Program Scheme Recognition
based Program Transformation for Performance Tuning
-- Beyond Compiler Optimizations--

Julian Kunkel, Yuichi Tsujita, Olga Mordvinova and Thomas Ludwig.
Tracing Internal Communication in MPI and MPI-I/O

Break

18:30--   Reception

December 10 (Thu)
Registration: 8:30-10:00, 17:00-19:00

9:00-10:00   Room A Keynote3
                       Computing with Membranes: An Overview

10:15--   Excursion
               Tour to two UNESCO world heritage sites in Hiroshima

18:30--   Saijo Hakuwa Hotel
               Banquet

December 11 (Fri)
Registration: 8:30-12:00

Room A The Second International Workshop on
       Sensor Networks and Ambient Intelligence(SENAMI 2009)
Room B Workshop on
       Ultra Performance and Dependable Acceleration Systems (UPDAS 2009)
Room C Second International Workshop on
       Reliability, Availability, and Security (WRAS 2009)
Room D International Workshop on
       Parallel and Distributed Algorithms and Applications (PDAA 2009)
18:30--   Kamoizumi Hall
               Farewell party

WRAS

9:00-10:15 Session 1

Fabienne Carrier, Stéphane Devismes, Franck Petit, Yvan Rivierre
Space-Optimal Deterministic Rendezvous

H.B. Acharya, E.S. Elmallah, M.G. Gouda
Consistent Fixed Points and Negative Gain

Doina Bein, Toshimitsu Masuzawa, Yukiko Yamauchi
Reliable Communication on Emulated Channels Resilient to Transient Faults

10:30-11:45 Session 2

Peter Pecho, Jan Nagy, Petr Hanácek
Power Consumption of Hardware Cryptography Platform for Wireless Sensor

Shlomi Dolev, Marina Sadetsky
Heuristic Certificates via Approximations

Shlomi Dolev, Yuval Elovici, Alex Kesselman, Polina Zilberman
Trawling Traffic under Attack, Overcoming DDoS Attacks
        by Target-Controlled Traffic Filtering

13:00-14:15 Session 3 & Posters

Kaouther Drira, Lyes Dekar, Hamamache Kheddouci
A Self-Stabilizing (delta+1)-Edge-Coloring Algorithm of Arbitrary Graphs

Jorge A. Cobb, Chin-Tser Huang
Stabilization of Maximal-Metric Routing without Knowledge of Network Size

Poster: Kazuyuki Akai, Tatsuhiro Tsuchiya, Tohru Kikuno
Converting Consensus Algorithms from a Round Model
        into a Conventional Distributed System Model

Poster: Atsushi Takada, Yukiko Yamauchi, Fukuhito Ooshita,
        Hirotsugu Kakugawa and Toshimitsu Masuzawa
A Distributed Algorithm to Update Spanning Trees Minimizing
        the Number of Output Changes

Poster: Daisuke Baba, Tomoko Izumi, Fukuhito Ooshita,
        Hirotsugu Kakugawa, Toshimitsu Masuzawa
Mobile Agents Rendezvous In Tree Networks

Poster: Tatsuya Noguchi, Tatsuhiro Tsuchiya, Tohru Kikuno
Safety Verification of Asynchronous Consensus Algorithms Using Model

14:30-15:45 Session 4

Timo Warns, Christian Storm, Oliver Theel
How to be a More Efficient Snoop: Refined Probe Complexity of Quorum Sets

Felix C. Freiling, Christian Lambertz, Mila Majster-Cederbaum
Modular Consensus Algorithms for the Crash-Recovery Model

E. Anceaume, F. Brasileiro, R. Ludinard, B. Sericola, F. Tronel
Analytical Study of Adversarial Strategies in Cluster-based Overlays

16:00-17:15 Session 5

Masaki Kondo, Shoichi Saito, Kiyohisa Ishiguro, Hiroyuki Tanaka, Hiroshi Matsuo
Bifrost : A Novel Anonymous Communication System with DHT

Dalibor Peric, Thomas Bocek, Fabio Victora Hecht, David Hausheer, Burkhard Stiller
The Design and Evaluation of a Distributed Reliable File System

Yann Busnel, Roberto Beraldi, Roberto Baldoni
A Formal Characterization of Uniform Peer Sampling Based on View Shuffling

UPDAS

09:00-09:25 Opening Session

09:25-10:15 Session 1   Takefumi MIYOSHI

Yosuke Mori, Kenji Kise
The Cache-Core Architecture to Enhance the Memory Performance
    on Multi-Core Processors

Mitsutaka Nakano, Masahiro Iida, Toshinori Sueyoshi
Improvement of Execution Efficiency on the MX Core

10:30-11:45   Invited Talk   Hironori Nakajo

Prof. Daisuke Takahashi, Ph.D. (University of Tsukuba - Tsukuba, Japan)
Parallel Implementation of Multiple-Precision Arithmetic and
    2.576 Trillion Digits of Pi Calculation on a Massively Parallel Cluster
    of Multi-Core Processors

13:00-14:15 Session 2   Tsutomu Yoshinaga

Reiji Suda, DaQi Ren
Accurate Measurements and Precise Modeling of Power Dissipation of CUDA Kernels
    toward Power Optimized High Performance CPU-GPU Computing

Hiroyuki Takizawa, Katsuto Sato, Kazuhiko Komatsu, Hiroaki Kobayashi
CheCUDA: A Checkpoint/Restart Tool for CUDA Applications

Nikhil Jain, Brajesh Pande, Phalguni Gupta
SMP Based Solver for Large Binary Systems

14:30-15:20 Session 3   Shoichi Hirasawa

Koh Uehara, Shimpei Sato, Takefumi Miyoshi, Kenji Kise
A Study of an Infrastructure for Research and Development of Many-Core Processors

Xiaosong Li, Hao Wang, Taoying Liu, Wei Li
Key Elements Tracing Method for Parallel XML Parsing in Multi-Core System

PDAA

09:00–10:15 Session 1   Oscar Ibarra (University of California, Santa Barbara)

Yakir Berchenko, Mina Teicher
Greedy Convex Embeddings for Ad-Hoc Networks

Ashish Shrestha, Firat Tekiner
On MANET Routing Protocols for Mobility and Scalability

P. Vieira, M.F. Caetano, P.S. Barreto, J.L. Bordim
Traffic Provisioning for HTTP Applications in WiFi Networks

10:30–11:45 Session 2   Yasuaki Ito (Hiroshima University)

Ting Ting Qin, Qi Cao, Qi Ying Wei, Satoshi Fujita
A Hierarchical Architecture for Real-Time Search in Peer-to-Peer Networks

Tianyang Sun, Chengchun Shu, Feng Li, Haiyan Yu, Lili Ma, Yitong Fang
An Efficient Hierarchical Clustering Method for Large Datasets with Map-Reduce

Yuichiro Mori, Koichi Asakura, Toyohide Watanabe
A Task Selection Based Power-aware Scheduling Algorithm for Applying DVS

13:00–14:15 Session 3   Shinichi Yamagiwa (Kochi University of Technology)

Hiroaki Irino, Yuuki Tanaka, Hiroyuki Kawai, Shingo Osawa, Yukio Shibata
Broadcasting Multiple Messages Using Cycle-Rooted Trees

Nasser Giacaman, Oliver Sinnen
Supporting Partial Ordering with the Parallel Iterator

Oliver Sinnen, Ratha Long, Quoc Huy
Aiding Parallel Programming with On-the-Fly Dependence Visualisation

14:30–16:10 Session 4   Jacir L. Bordim (University of Brasilia)

Asim Munawar, Mohamed Wahib, Masaharu Munetomo, Kiyoshi Akama, Chikara Miyaji
Theoretical and Empirical Analysis of a GPU
            Based Parallel Bayesian Optimization Algorithm

Shinichi Yamagiwa, Hiroshi Ichikawa
Performance Acceleration for Video Synthesizing Software Targeted to Sports Training
            Using Multicore Processor

Yasuaki Ito, Koji Nakano
An Efficient Parallel Sorting Compatible with the Standard qsort Duhu Man

Masaya Nakagawa, Duhu Man, Yasuaki Ito, Koji Nakano
A Simple Parallel Convex Hulls Algorithm for Sorted Points and
            the Performance Evaluation on the Multicore Processors

SeNAmI

	Session 1
0900 – 0925	**Virtual Scent: Finding a Location of Interest in Ambient Intelligence Environment** Hiroshi Sato, Takeru Inoue, Hideaki Iwamoto, and Noriyuki Takahashi (NTT Corporation, Japan)
0925 – 0950	**Error Compensation for Cricket Indoor Location System** Shuqiao Zhou, Haoran Feng, and Ruixin Yuan (Tsinghua University, China)
0950 – 1015	**CASanDRA: A framework to provide Context Acquisition Services ANd Reasoning Algorithms for Ambient Intelligence Applications** Ana M. Bernardos, Paula Tarrío, and José R. Casar (Technical University of Madrid, Spain)
1015 – 1030	Break
	Session 2
1030 – 1055	**uTupleSpace: A Bi-Directional Shared Data Space for Wide-Area Sensor Network** Takayuki Nakamura, Motonori Nakamura, Atsushi Yamamoto, Keichiro Kashiwagi, Yutaka Arakawa, Masato Matsuo, and Hiroya Minami (NTT Corporation, Japan)
1055 – 1120	**Single Sensor Acoustic Feature Extraction for Embedded Realtime Vehicle Classification** Andreas Starzacher and Berhard Rinner (Klagenfurt University, Austria)
1120 – 1145	**Greedy Convex Embeddings for Sensor Networks** Yakir Berchenko and Mina Teicher (Bar-Ilan University, Israel)
1145 – 1330	Lunch
	Session 3
1330 – 1415	**Poster Session** **A Room-Level Indoor Location System for Smart Houses** Seon-Woo Lee (Hallym University, Korea) **An Integrated Personal Mobility Management Framework based on RFID in Heterogeneous Fixed and Mobile Networks** Yun Won Chung (Soongsil University, Korea) **Design and Implementation of an Advanced Communication Framework for Ubiquitous Computing Environment** Taishi Ito, Hideyuki Takahashi, Takuo Suganuma, Tetsuo Kinoshita, and Norio Shiratori (Tohoku University, Japan) **Self-adaptive Route Selection for DHT in Wireless Sensor Networks** Rui Lin, Kenji Leibnitz, Naoki Wakamiya, and Masayuki Murata (Osaka University, Japan)

	Sustainable Living through Ambient Intelligence: A Bi-directional Publish-Subscribe System Using a Cross-layer Design Yang Liu, Boon-Chong Seet, and Adnan Al-Anbuky (Auckland University of Technology, New Zealand) **Bio-inspired Autonomous and Adaptive Coverage Control for Wireless Sensor Networks** Takuya Iwai, Naoki Wakamiya, and Masayuki Murata (Osaka University, Japan) **Pseudo-Synchronous MAC Protocol with Adaptive Sleep Control for Wireless Sensor Networks** Noriyuki Hashimoto, Hideyuki Uehara, and Takashi Ohira (Toyohashi University of Technology, Japan) **Queue Dynamics in Complex Networks** Takahiro Hirayama (Osaka University, Japan), Shin'ichi Arakawa (Osaka University, Japan), Ken-ichi Arai (NTT Communication Science Laboratories, Japan), and Masayuki Murata (Osaka University, Japan) **Improvement and Evaluation of Scenario-Type Hypothesis Object Tracking** Masakazu Murata, Yoshiaki Taniguchi, Go Hasegawa, and Hirotaka Nakano (Osaka University, Japan)
1415 – 1430	Break
Session 4	
1430 – 1515	**Poster Session (continued)**
1515 – 1545	**Best Poster Awards Presentation and Closing Remarks**