PROGRAM GUIDE

BWCCA-2011
6th International Conference on Broadband and Wireless Computing, Communication and Applications

3PGCIC-2011
6th International Conference on P2P, Parallel, Grid Cloud and Internet Computing

Organized by:

October 26th-28th, 2011
TABLE OF CONTENT

3PGCIC-2011/BWCCA-2011
UNIVERSITAT POLITÈCNICA DE CATALUNYA, BARCELONA, SPAIN

BWCCA-2011 Conference Organizing Committee ........................................... 5
Track Areas Chairs ....................................................................................... 5

BWCCA-2011 CONFERENCE & WORKSHOPS PROGRAM ......................... 9

Wednesday, October 26, 2011 .................................................................... 9

09:00 – 10:30 Single Session ....................................................................... 9

BWCCA-2011/3PGCIC-2011 Opening & Keynote ......................................... 9

10:30 – 11:00 Coffee Break ......................................................................... 9

11:00 – 12:30 Parallel Sessions ................................................................... 9

BWCCA-S1: ............................................................................................... 9

BWCCA-S2 ............................................................................................... 10

W-CWECS-S1: ......................................................................................... 10

12:30 – 14:00 Lunch Break ......................................................................... 10

14:00 – 15:30 Parallel Sessions ................................................................... 10

BWCCA-S3: ............................................................................................. 10

BWCCA-S4: ............................................................................................. 11

W-CWECS-S2: .......................................................................................... 11

16:00 – 17:30 Parallel Sessions .................................................................. 11

BWCCA-S5: ............................................................................................. 11

BWCCA-S6: ............................................................................................. 12

W-CWECS-S3: .......................................................................................... 12

19:00 – 21:00 Welcome Reception Party ...................................................... 12

Thursday, October 27, 2011 ..................................................................... 13

09:00 – 10:30 Parallel Sessions .................................................................. 13

BWCCA-S7: .............................................................................................. 13

BWCCA-S8: .............................................................................................. 13

W-NGWM-S1: ......................................................................................... 13

10:30 – 11:00 Coffee Break ....................................................................... 13

11:00 – 12:30 Parallel Sessions .................................................................. 13

BWCCA-S9: .............................................................................................. 14

W-DCS-S1: ............................................................................................... 14

W-NGWMN-S2: ....................................................................................... 14

12:30 – 14:00 Lunch Break ....................................................................... 14

14:00 – 15:30 Parallel Sessions .................................................................. 15

BWCCA-S10: ............................................................................................ 15

W-ASTSA-S1: .......................................................................................... 15

W-NTCCA-S1: .......................................................................................... 15
15:30 – 16:00 Coffee Break ..........................................................15
16:00 – 17:30 Parallel Sessions ......................................................16
   BWCCA-S11: ........................................................................16
   W-ASTSA-S2: ....................................................................16
   W-NTCCA-S2: ....................................................................16
20:00-22:00 Conference Banquet..................................................16
Friday, October 28, 2011 ..............................................................17
  09:00 – 10:00 Single Session......................................................17
  BWCCA-2011/3PGCIC-2011 Keynote: ....................................17
  10:00 – 10:30 Coffee Break.....................................................17
  10:30 – 12:00 Parallel Sessions.................................................17
   BWCCA-S12: ........................................................................17
   W-ISSE-S1: .........................................................................17
  12:00 – 13:30 Parallel Sessions..................................................18
   BWCCA-S13: ........................................................................18
   W-MAPWC-S1: ....................................................................18
  13:30 – 14:30 Lunch Break........................................................18
3PGCIC-2011 Conference Organizing Committee..........................19
Track Areas Co-Chairs................................................................19
3PGCIC-2011 CONFERENCE & WORKSHOPS PROGRAM............21
Wednesday, October 26, 2011......................................................21
  09:00 – 10:30 Single Session......................................................21
   BWCCA-2011/3PGCIC-2011 Opening & Keynote: ..................21
  10:30 – 11:00 Coffee Break.....................................................21
  11:00 – 12:30 Parallel Sessions................................................21
   3PGCIC-S1: .........................................................................21
   W-SEDM-S1: ......................................................................22
  12:30 – 14:00 Lunch Break........................................................22
  14:00 – 15:30 Parallel Session....................................................22
   3PGCIC-S2: Security, Dependability and Reliability................22
   W-BIDS-S1: .......................................................................22
  15:30 – 16:00 Coffee Break........................................................23
  16:00 – 17:30 Parallel Session....................................................23
   3PGCIC-S3: .........................................................................23
   W-MWVRTA-S1: ..................................................................23
  19:00 – 21:00 Welcome Reception Party ....................................23
Thursday, October 27, 2011..........................................................24
  09:00 – 10:30 Parallel Session....................................................24
   3PGCIC-S4: .........................................................................24
<table>
<thead>
<tr>
<th>Time</th>
<th>Event Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:30 – 11:00</td>
<td>Coffee break</td>
<td>24</td>
</tr>
<tr>
<td>11:00 – 12:30</td>
<td>Parallel Session</td>
<td>24</td>
</tr>
<tr>
<td>12:30 – 14:00</td>
<td>Lunch Break</td>
<td>25</td>
</tr>
<tr>
<td>14:00 – 15:30</td>
<td>Parallel Session</td>
<td>25</td>
</tr>
<tr>
<td>15:30 – 16:00</td>
<td>Coffee Break</td>
<td>26</td>
</tr>
<tr>
<td>16:00 – 17:30</td>
<td>Parallel Sessions</td>
<td>26</td>
</tr>
<tr>
<td>20:00-22:00</td>
<td>Conference Banquet</td>
<td>26</td>
</tr>
<tr>
<td>09:00 – 10:00</td>
<td>Single Session</td>
<td>27</td>
</tr>
<tr>
<td>10:00 – 10:30</td>
<td>Coffee Break</td>
<td>27</td>
</tr>
<tr>
<td>10:30 – 12:00</td>
<td>Parallel Session</td>
<td>27</td>
</tr>
<tr>
<td>12:00-13:30</td>
<td>Parallel Sessions</td>
<td>29</td>
</tr>
<tr>
<td>13:30 – 14:30</td>
<td>Lunch Break</td>
<td>28</td>
</tr>
</tbody>
</table>
BWCCA-2011 Conference Organizing Committee

Honorary Chair
Makoto Takizawa, Seikei University, Japan

General Co-Chairs
Leonard Barolli, Fukuoka Institute of Technology, Japan
Fatos Xhafa, Technical University of Catalonia, Spain

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Vidyasagar Potdar, Curtin University, Australia

Web Administrator
Joan Arnedo Moreno, Open University of Catalonia, Spain

Track Areas Chairs

1. Wireless Networks
Ray-Guang Cheng, National Taiwan University of Science and Technology, Taiwan
Tetsuya Shigeyasu, Hiroshima International University, Japan

2. Ad-Hoc, Sensor, Mesh Networks
Akimitsu Kanzaki, Osaka University, Japan
Dritan Nace, Universite de Technologie de Compiegne, France

3. Ubiquitous and Pervasive Computing
Feilong Tang, Shanghai Jiao Tong University, China
Tomoki Yoshihisa, Osaka University, Japan

4. Multimedia and Web Applications
Kosuke Takano, Kanagawa Institute of Technology, Japan
Roberto Pirrone, University of Palermo, Italy
5. **Network Security, Trust and Privacy**  
Stephen Neville, University of Victoria, Canada  
Josep Domingo-Ferrer, Universitat Rovira i Virgili, Spain

6. **Mobile, Vehicular and Cellular Networks**  
Phone Lin, National Taiwan University, Taiwan  
Lin Cai, University of Victoria, Canada

7. **Distributed Algorithms and Systems**  
Farshad Khunjush, Shiraz University, Iran  
Kaveh Jokar Deris, Syracuse University, USA

8. **Network Protocols and Network Performance Analysis**  
Takuo Nakashima, Tokai University, Japan  
Alfonso Urso, CNR-ICAR, Italy

9. **Intelligent Networking and Embedded Systems**  
Salvatore Vitabile, University of Palermo, Italy  
Watheq El-Kharashi, Ain Shams University, Egypt

10. **Wireless Home Automation Technologies**  
Wei Li, Victoria University of Wellington, New Zealand  
Vidyasagar Potdar, Curtin University, Australia
Mario Köppen, Network Design and Research Center, Kyushu Institute of Technology, Japan

Fairness, Preference, and Dominance - Perspectives of Relational Mathematics in Network Design and Control

Abstract

Relational mathematics, as it is studied in mathematical economics and social choice theory, provides a rich and general framework and appears to be a natural and direct way to paraphrase optimization goals, to represent user preferences, to justify fairness criteria, or to valuate utility. In this talk, we will focus on the specific application aspects of formal relations in network design and control problems. The talk will have three main parts. In the first part, we want to present a suite of new relations that are able to represent fairness as mediator between user preference and network infrastructure dominance. Starting with the "classical" fairness relations maxmin fairness, proportional fairness and lexmin, we can recover their mutual relationships and their design flexibility in order to define further relations, with regard to e.g. multi-fairness, ordered fairness, self-weighted fairness, grouped fairness, and fuzzy fairness. In the second part, we want to illustrate and demonstrate the application of these relations for basic network design and control problems, esp. routing path selection, congestion control, wireless channel allocation, and relaying. The third part is concerned with the tractability of related problems, and we will present generic approaches by meta-heuristic algorithms, esp. algorithms obtained from suitable modifications of evolutionary multi-objective optimization algorithms that can cope with a broad spectrum of occurring search and approximation problems. We will conclude with the outlook on a concept of generalized optimization.
Keynote Talk from Industry
Jordi Angusto
General Manager at Aerospace Research & Technology Centre
Barcelona, SPAIN

Why innovate? Where innovate?

Abstract
Innovation is the way through for the humans to improve its life, since we left the trees. And this is the way still: no innovation succeeds without improve our lives. Time ago, you could get a "barony" from the king; today, the power you can get depends on the benefits you can provide to your customers. And this is not a forever's power: there are others working hard to offer greater benefits to the market, and get your chair.

And this is not a tale. Innovation, in terms of product, and even more in terms of productivity, is always behind the economic health of a company or a country. Forget erroneous ideas about workers costs and its impact on economic localization. We don't buy in China "work intensive products", we buy "their" more capital intensive products. In technical terms, we buy the products with the higher "relative" productivity. Holland exports potatoes and tomatoes, and Holland is not a cheap workers place. They also exports flowers, as the Colombian does. In both cases, flowers have the higher productivity in their respective countries.

So, let's welcome the good news: tomorrow is decided every day, and everybody is invited to participate innovating; the global competition starts at local level, with the "higher productivity companies" taking part of the champion league.

In this talk we will focus on innovation in the field of aerospace technology and will bring the experience of the Aerospace Research & Technology Center of Catalonia (CTAE) from several research and development projects on positioning and navigation.
BWCCA-2011

Sixth International Conference on Broadband and Wireless Computing, Communication and Applications

BWCCA-2011 CONFERENCE & WORKSHOPS PROGRAM

Wednesday, October 26, 2011

09:00 – 10:30 Single Session

BWCCA-2011/3PGCIC-2011 Opening & Keynote: Prof. Mario Köppen, Kyushu Institute of Technology, Japan

“Fairness, Preference, and Dominance - Perspectives of Relational Mathematics in Network Design and Control”

10:30 – 11:00 Coffee Break

11:00 – 12:30 Parallel Sessions

BWCCA-S1: Vehicular, Mesh and P2P Networks– Room BWCCA 1

Chair: Bhed Bahadur Bista, Iwate Prefectural University, Japan

1. VANET Simulators: A Survey on Mobility and Routing Protocols
   Evjola Spaho, Leonard Barolli, Gjergji Mino, Fatos Xhafa, Vladi Kolici

2. General Active Position Detectors Protect VANET Security
   Gongjun Yan, Bhed Bahadur Bista, Danda B. Rawat, Earl F. Shaner

3. Effects of Mutation and Crossover in Genetic Algorithms for Node Placement in WMNs Considering Giant Component Parameter
   Admir Barolli, Tetsuya Oda, Evjola Spaho, Fatos Xhafa, Leonard Barolli, Makoto Takizawa

4. E-AODV for Wireless Mesh Networks and Its Performance Evaluation
   Amrita Bose Paul, Shantanu Konwar, Upola Gogoi, Sukumar Nandi, Santosh Biswas
BWCCA-S2: Algorithms and Systems – Room BWCCA 2

Chair: Farookh Khadeer Hussain, Curtin University, Australia

1. Distributed Search Engine for an IaaS Based Cloud
   Yuuta Ichikawa, Minoru Uehara

2. A Hybrid TOA/AOA Hardware-Oriented Algorithm for Mobile Positioning
   Amir Hossein Akhavan Salmasi, Evgueni Doukhnitch, Muhammed Salamah

3. Evaluations of Stateful NMR with Byzantine Failures
   Minoru Uehara

   Naeem Khalid Janjua, Farookh Khadeer Hussain

W-CWEC-S1: Steganography, Cryptography and DoS Attacks – Room BWCCA 3

Chair: Fang-Yie Leu, Tunghai University, Taiwan

1. Steganography and Secure Communication on Online Social Networks and Online Photo Sharing
   Aniello Castiglione, Bonaventura D’Alessio, Alfredo De_Santis

2. Energy Consumption Analysis for Cryptographic Algorithms with Different Clocks on Smart Cards in Mobile Devices
   Chu-Hsing Lin, Guan-Han Chen, Shih-Pei Chien

   Francesco Palmieri, Sergio Ricciardì, Ugo Fiore

12:30 – 14:00 Lunch Break

14:00 – 15:30 Parallel Sessions

BWCCA-S3: Multimedia Systems – Room BWCCA 1

Chair: Antonio Gentile, University of Palermo, Italy

1. A Multichannel Information System to Build and Deliver Rich User-Experiences in Exhibits and Museums
   Antonio Gentile, Salvatore Andolina, Antonio Massara, Dario Pirrone, Giuseppe Russo,
   Antonella Santangelo, Eleonora Trumello, Salvatore Sorce

2. An Interactive Music Learning System in Ensemble Performance Class
   Kosuke Takano, Shiori Sasaki

3. Motion Tracking and Processing for Multimedia Sport E-Learning
   Kin Fun Li, Kosuke Takano, Mark Graham Johnson
BWCCA-S4: Sensor Networks – Room BWCCA  2

Chair: Leonard Barolli, Fukuoka Institute of Technology, Japan

   Tao Yang, Gjergji Mino, Leonard Barolli, Arjan Durresi, Fatos Xhafa

   GholamHossein EkbataniFard, Reza Monsefi

   Akio Koyama, Ryoma Watanabe, Leonard Barolli

4. Examination of Data Transmission Adapting to Density of Sensor in Triage Network
   Takuya Saito, Hiroki Tamura, Yuto Toguchi, Hiroshi Shigeno

W-CWECS-S2: Forensics, Anti-Forensics and Digital Evidences – Room BWCCA  3

Chair: Aniello Castiglione, University of Salerno, Italy

1. A Novel Anti-forensics Technique for the Android OS
   Pietro Albano, Aniello Castiglione, Giuseppe Cattaneo, Alfredo De_Santis

2. Research of Digital Evidence Forensics Standard Operating Procedure with Comparison and Analysis Based on Smart Phone
   I-Long Lin, Han-Chieh Chao, Shih-Hao Peng

3. Automatic, Selective and Secure Deletion of Digital Evidence
   Aniello Castiglione, Giuseppe Cattaneo, Giancarlo De_Maio, Alfredo De_Santis

   Hung-Jui Ke, Jonathan Liu, Shiuh-Jeng Wang, Dushyant Goyal

15:30 – 16:00 Coffee Break

16:00 – 17:30 Parallel Sessions

BWCCA-S5: Communication Systems – Room BWCCA  1

Chair: Kin Fun Li, University of Victoria, Canada

1. Design of T-Shaped Slot Antenna for UWB Communications Systems
   Satya Kumar. V, Anup Kumar Gogoi

2. Service Specific Queue Sorting and Scheduling Algorithm for OFDMA-Based LTE-Advanced Networks.
   R. Kausar, Y. Chen, K.K. Chai

3. An Iterative Receiver for Fast Fading Channels Using Two Kalman Filters
   Alireza Movahedian, Michael McGuire
BWCCA-S6: Social Networking – Room BWCCA  2
Chair: Minoru Uehara, Toyo University, Japan

1. Lessons Learned from Online Social Networking of Physical Things
   Andreas Kamilaris, Diomidis Papadiomidous, Andreas Pitsillides

2. 150 Digit. Integrating 3D Visit and Social Functions into a Web 3.0 Learning-Oriented Approach
   Rossana Damiano, Cristina Gena, Vincenzo Lombardo, Fabrizio Nunnari, Alessandra Suppini,
   Andrea Crevola

   Hyundong Lee, Mokdong Chung

4. Enhancing Personal Efficiency with Pervasive Services and Wearable Devices
   Mauro Migliardi, Marco Gaudina, Andrea Brogni

W-CWECS-S3: Systems Applications and Grids– Room BWCCA  3
Chair: Fang-Yie Leu, Tunghai University, Taiwan

1. A Secure RFID Deactivation/Activation Mechanism for Customer Service and Consumer Shopping
   Yu-Yi Chen, Zhen-Jie Qiu, Jun-Chao Lu, Jinn-Ke Jan

2. A Relational Compound Collaborative Filtering Recommendation System
   Chiu-Ching Tuan, Chi-Fu Hung, Kuan-Wei Tseng

3. Improving Data Grids Performance by Using Popular File Replicate First Algorithm
   Fang-Yie Leu, Ming-Chang Lee, Jia-Chun Lin

4. An Interface Design Secure Measurement Model for Improving Web App Security
   Sen-Tarng Lai

19:00 – 21:00 Welcome Reception Party
Thursday, October 27, 2011

09:00 – 10:30 Parallel Sessions

**BWCCA-S7: Ad-hoc Networks and MANETs – Room BWCCA 1**
Chair: Noriki Uchida, Saitama Institute of Technology, Japan

   *Elis Kulla, Makoto Ikeda, Masahiro Hiyama, Leonard Barolli, Rozeta Miho*

2. On Assessing the Impact of Jamming Strategies on the Behavior of DYMO-Based MANETs
   *Deepali Arora, Eamon Millman, Stephen W. Neville*

3. User Policy Based Link and Route Selection Methods for Never Die Network
   *Noriki Uchida, Kazuo Takahata, Yoshitaka Shibata*

**BWCCA-S8: Network Protocols – Room BWCCA 2**
Chair: Makoto Takizawa, Seikei University, Japan

1. A New TCP Control Method for Guaranteeing Throughput over High Speed Satellite Links
   *Hiroyasu Obata, Kazuya Tamehiro, Kenji Ishida*

2. Evaluation of a Quorum-Based Synchronization Protocol
   *Tadateru Ohkawara, Ailixier Aikebaier, Tomoya Enokido, Makoto Takizawa*

   *Osama Khader, Andreas Willig, Adam Wolisz*

**W-NGWM-S1: Wireless Networks Performance Evaluation – Room BWCCA 3**
Chair: Hsing-Chung Chen, Asia University, Taiwan

1. Optimal Performance Study of IEEE 802.11 DCF with Contention Window
   *Chien-Erh Weng, Chun-Yin Chen, Chiung-Hsing Chen, Chien-Hunh Chen*

2. Performance of Adaptive Parallel Interference Cancellation for OFDM Mobile Communication Systems
   *Yung-Fa Huang, Tan-Hsu Tan, Hsing-Chung Chen, Cheng-Min Yeh*

10:30 – 11:00 Coffee Break

11:00 – 12:30 Parallel Sessions
BWCCA-S9: Security- Room BWCCA 1

Chair: Tomoyuki Nagase, Hirosaki University, Japan

1. Multi-device Key Management Using Visual Side Channels in Pervasive Computing Environments
   Leonid Batyuk, Seyit Ahmet Camtepe, Sahin Albayrak

2. Hardware Implementation of Prearranged Tables Based Modular Inversion
   Tsutomu Ishida, Tomoyuki Nagase, Yoshio Yoshioka

3. Building Trust for lambda-Congenial Secret Groups
   Di Ma, Claudio Soriente

4. Digital Signature-Based Secure Communication in Cognitive Radio Networks
   Sazia Parvin, Farookh Khadeer Hussain

W-DCS-S1: Fault Detection and Diagnosis – Room BWCCA 2

Chair: Andrei Doncescu, LAAS, CNRS Toulouse, France

1. Diagnosis of Automotive Systems Based on Logfile Similarity
   N. Kabbaj, A. Doncescu

2. Aircraft Actuator Fault Detector Based on Non Linear Inverse Dynamics
   Lunlong Zhong, Andrei Doncescu, Félix Mora-Camino

3. Design and Implementation of an Embedded System for Ambulatory Cardiac Monotoring
   El Mimouni El_Hassan, Karim Mohammed

4. Fault Detection and Isolation Using Fuzzy-ARTMAP Classification and Conflict Intersection
   Mourad Benkaci, Andrei Doncescu, Bruno Jammes

5. Modelling of Submarine Navigation by Nonmonotonic Logic
   Isabelle Toulgoat, Pierre Siegel, Andrei Doncescu

W-NGWMN-S2: Network Architectures and Protocols – Room BWCCA 3

Chair: Hsing-Chung Chen, Asia University, Taiwan

1. An Online Evolutionary Programming Method for Parameters of Wireless Networks
   Jason B. Ernst, Joseph Alexander Brown

2. Node’s Power Source Type Identification in Wireless Sensor Networks
   Konstantin Mikhaylov, Jouni Tervonen

3. An Integrated Two-Tier Multicast-Agent Architecture for All-IP Multicast Transport Services
   Chih-Chao Wen, Chi-Ju Chiu, Cheng-Shong Wu, Hui-Kai Su, Yuan-Sun Chu

4. A Time Constraint Three-Party Encrypted Key Exchange Protocol
   Hsing-Chung Chen, Syuan-Zong Lin, Yung-Fa Huang, Hsien-Yun Chuang

12:30 – 14:00 Lunch Break
Parallel Sessions

**BWCCA-S10: Wireless and Radio Networks – Room BWCCA 1**

*Chair: Sang Soo Yeo, Mokwon University, Korea*

1. Kernel-Based Channel Gain Estimation for Dynamic Spectrum Access in Cognitive Radio Networks  
   *Po-Chiang Lin, Tsung-Nan Lin*

2. Multi-hop Wireless Networks Performance Evaluation via NS-3 Simulator  
   *Makoto Ikeda, Masahiro Hiyama, Elis Kulla, Leonard Barolli, Makoto Takizawa*

3. A Study on the Performance Improvement of Impulse-Radio System in Multiple Interference Environment  
   *Yang Sun Lee, Sang Soo Yeo, Jong Hyuk Park, Leonard Barolli*

4. Degree Distribution of Unit Disk Graphs with Uniformly Deployed Nodes on a Rectangular Surface  
   *Renato Ferrero, Filippo Gandino*

**W-ASTSA-S1: Sensors and Applications – Room BWCCA 2**

*Chair: Bhed Bahadur Bista, Iwate Prefectural University, Japan*

1. Indoor Location Fingerprinting Based on Data Reduction  
   *Dragan Kukolj, Marina Vuckovic, Szilveszter Pletl*

2. Performance Analysis of Underwater Swarm Sensor Networks  
   *Marco Tabacchiera, Samuela Persia, Chiara Lodovisi, Silvello Betti*

   *Nan Meng, Jiahong Wang, Eiichiro Kodama, Toyoo Takata*

**W-NTCCA-S1: Network Application and Security – Room BWCCA 3**

*Chair: Takuo Nakashima, Tokai University, Japan*

1. Visualization for Activity Information Sharing System Using Self-Organizing Map  
   *Yuichi Hattori, Sozo Inoue, Go Hirakawa*

2. A Correction Algorithm for Stereo Matching with Web Cameras  
   *Ningping Sun, Hiroshi Nagaoka, Takuya Shigemoto*

3. An Anomaly Detection System Based on Chi-Square Method with Dynamic BIN Algorithm  
   *Shunsuke Oshima, Yusuke Ichimura, Takuo Nakashima, Toshinori Sueyoshi*

**15:30 – 16:00 Coffee Break**
BWCCA-S11: Energy Efficient and Power Management – Room BWCCA 1
   Chair: Tomoya Enokido, Rissho University, Japan
   1. Energy Efficient Distributed Systems for Storage-Based Applications
      Takuro Inoue, Ailixier Aikebaier, Tomoya Enokido, Makoto Takizawa
   2. Power Management for SVC Video over Wireless Networks
      C. Bouras, S. Charalambides, K. Stamos, S. Stroumpis, G. Zaoudis
   3. Improving of EPCLB Algorithm for Reducing the Overhead of a Load Balancer
      Tomoya Enokido, Ailixier Aikebaier, Makoto Takizawa

W-ASTSA-S2: Protocols and Algorithms – Room BWCCA 2
   Chair: Bhed Bahadur Bista, Iwate Prefectural University, Japan
   1. Probabilistic Target Coverage in Wireless Sensor Networks
      Jau-Wu Huang, Chia-Mao Hung, Kai-Chao Yang, Jia-Shung Wang
   2. Wireless Sensor Networks Energy Optimization Using User Location Information in Smart Homes
      Harri Pensas, Miika Valtonen, Jukka Vanhala
      Naeem Ahmad, Najeem Lawal, Mattias O’Nils, Bengt Oelmann, Muhammad Imran, Khursheed Khursheed

W-NTCCA-S2: System and Network Performance – Room BWCCA 3
   Chair: Takuo Nakashima, Tokai University, Japan
   1. Mint: Booting Multiple Linux Kernels on a Multicore Processor
      Yoshinari Nomura, Ryota Senzaki, Daiki Nakahara, Hiroshi Ushio, Tetsuya Kataoka,
      Hideo Taniguchi
   2. Performance of the MPI Based File Share System
      Daisuke Tsukamoto, Takuo Nakashima
   3. Active Queue Management with the Stable Unit Average Calculation
      Fumihiko Nakamura, Takuo Nakashima

20:00-22:00 Conference Banquet
Friday, October 28, 2011

09:00 – 10:00 Single Session

BWCCA-2011/3PGCIC-2011 Keynote: Jordi Angusto, General Manager at Aerospace Research & Technology Centre (CTAE), Spain
“Why innovate? Where innovate?”

10:00 – 10:30 Coffee Break

10:30 – 12:00 Parallel Sessions

BWCCA-S12: Network Applications and Algorithms – Room BWCCA 1
Chair: Leonard Barolli, Fukuoka Institute of Technology, Japan
1. Wireless Sensing System for Healthcare Monitoring Thermal Physiological State and Recognizing Behavior
   Chika Sugimoto, Ryuji Kohno
2. Measurement of LowPAN Network Coexistence with Home Microwave Appliances in Laboratory and Home Environments
   Milan Simek, Michal Fuchs, Lubomir Mraz, Patrik Moravek, Miroslav Botta
3. A New Scheduling Scheme for Voice Awareness in 3G LTE
   R. Musabe, H. Larijani, B.G. Stewart, T. Boutaleb

W-ISSE-S1: Bio-Sensing, Processing, Application and Networking – Room BWCCA 2
Chair: Chi-Yi Lin, Tamkang University, Taiwan
1. Computer Vision Techniques for Hidden Conditional Random Field-Based Mandarin Phonetic Symbols I Recognition
   Chien-Cheng Lee, Yi-Fang Li
2. A RFID-Based Personal Navigation System for Multi-story Indoor Environments
   Chi-Yi Lin, Chih-Yuan Chang, Hui-Huang Hsu
3. Accelerometer Array and Method to Obtain a 3D Representation of the Spine Posture
   Agustín López-Quintana, Juan Carlos Tejero-Calado, Fernando Vidal-Verdú
4. A Survey on Home Telemedicine
   Kin Fun Li, Wei Li
5. Tele-Auscultation System
   Christian McMechan, Irina Morozov, Aaron Patten, Poman So
12:00 – 13:30 Parallel Sessions

**BWCCA-S13: Modulation, Decoding and Optimization – Room BWCCA 1**

**Chair:** Antonio Gentile, University of Palermo, Italy

1. Improvement of Concatenated Decoding Using Bit-Stuffing  
   *Natasa Zivic*

   *Vjaceslavs Bobrovs, Aleksejs Udalcovs, Sandis Spolitis, Oskars Ozolins, Girts Ivanovs*

3. Finite Field Multiplication Using Reordered Normal Basis Multiplier  
   *Fayez Gebali, Turki Al-Somani*

**W-MAPWC-S1: Wireless Communication Algorithms and Systems – Room BWCCA 2**

**Chair:** Kazunori Uchida, Fukuoka Institute of Technology, Japan

1. Some Trials to Suppress Unnecessary Resonance in Photonic Crystal Cavity Structure  
   *Yongmei Zhang, Hiroyuki Terashima, Daichi Ogata, Hiroshi Maeda*

2. Doppler Shift Distribution of Target Moving above Random Rough Surface  
   *Kazunori Uchida, Junichi Honda, Shunsuke Nakashima*

   *Jiro Iwashige, Leonard Barolli, Yuki Isayama, Ryo Nagao, Katsuki Hayashi*

4. Investigation of Channel Usage and Packetloss in a MANET Testbed for Stairs Indoor Scenarios  
   *Masahiro Hiyama, Elis Kulla, Makoto Ikeda, Leonard Barolli*

13:30 – 14:30 Lunch Break
3PGCIC-2011 Conference Organizing Committee

Honorary Co-Chair
Makoto Takizawa, Seikei University, Japan

General Co-Chairs
Fatos Xhafa, Technical University of Catalonia, Spain
Leonard Barolli, Fukuoka Institute of Technology, Japan

Program Committee Co-Chairs
Joanna Kolodziej, University of Bielsko-Biala, Poland
Samee U. Khan, North Dakota State University, USA

Workshop Chair
Hiroaki Nishino, Oita University, Japan

Web Administrator
Joan Arnedo Moreno, Open University of Catalonia, Spain

Track Areas Co-Chairs

1. High Performance and Scalable Computing
   Horacio Gonzalez-Velez, Robert Gordon University, Aberdeen, UK
   Rong Ge, Marquette University, USA

2. Cluster and Grid Computing
   Lizhe Wang, Indiana University, USA
   Laurent Lefevre, INRIA, France

   Cheng Fu, Nanyang Technological University, Singapore
   Juan Carlos Burguillo-Rial, University of Vigo, Spain

4. Data Intensive Computing, Data Mining
   Piotr Synak, Infobright Inc. & Polish-Japanese Inst. of Information Technology, Poland
   Fayez Gebali, University of Victoria, Canada
5. **Groupware and Collaborative Systems**  
Gregoire Danoy, University of Luxembourg, Luxembourg  
Richard Hill, University of Derby, UK

6. **Semantic Web and Grid Services**  
Juan Li, North Dakota State University, USA  
Aleksander Byrski, AGH University of Science and Technology, Poland

7. **Virtual Organizations, Enterprise and Cloud Computing**  
Nik Bessis, University of Derby, UK  
Martin G. Jaatun, SINTEF, Norway

8. **Security, Dependability and Reliability in Grids and Clouds**  
Wendy Hui Wang, Stevens Institute of Technology, Hoboken, USA  
Neal N. Xiong, Georgia State University, USA

9. **Multimedia Applications**  
Yoshishiro Okada, Kyushu University, Japan  
Juggapong Natwichai, Chiang Mai University, Thailand

10. **Parallel and Distributed Computing in Economics**  
Tuan Ahn Trinh, Budapest University of Technology and Economics, Hungary  
Pawel Pawlewski, Poznan University of Technology, Poland

11. **Global Optimization in Large-Scale Distributed Systems**  
Bernabe Dorronsoro, University of Luxembourg, Luxembourg  
Tomas Maul, University of Nottingham, Malaysia Campus, Malaysia
Sixth International Conference on P2P, Parallel, Grid, Cloud and Internet Computing

3PGCIC-2011 CONFERENCE & WORKSHOPS PROGRAM

Wednesday, October 26, 2011

09:00 – 10:30 Single Session

BWCCA-2011/3PGCIC-2011 Opening & Keynote: Keynote: Prof. Mario Köppen,
Kyushu Institute of Technology, Japan
“Fairness, Preference, and Dominance - Perspectives of Relational Mathematics in Network Design and Control”

10:30 – 11:00 Coffee Break

11:00 – 12:30 Parallel Sessions

3PGCIC-S1: Grid Computing – Room 3PGCIC 1
Chair: Joanna Kolodziej, University of Bielsko Biala, Poland

1. A Decentralized Resource Broker Model with Authorization and Authentication Based on Multiparty Key Agreement Protocol in Data Grids
   Wen-Chung Chiang, Chao-Tung Yang, Hsiu-Hsia Lin

2. Genetic Algorithms for Energy-Aware Scheduling in Computational Grids
   Joanna Kołodziej, Samee Ullah Khan, Fatos Xhafa

3. GridFactory: Distributed Computing on Ephemeral Resources
   Frederik Orellana, Marko Niinimaki

4. Provenance Management for Neuroimaging Workflows in neuGrid
   Ashiq Anjum, Nik Bessis, Richard Hill, Richard McClatchey, Irfan Habib, Kamran Soomro, Peter Bloodsworth, Andrew Branson
W-SEDM-S1: Smart Environments for Disaster Management – Room 3PGCIC 2
Chair: Nik Bessis, University of Derby, UK
1. Multi-agent Approach for Disaster Management
   Elton Domnori, Giacomo Cabri, Letizia Leonardi
2. Electronic Triage System: Casualties Monitoring System in the Disaster Scene
3. A Situation-Based Service Composition Model for Dynamic Environments
   Hien Le
4. Towards an Integrated Multi-hazard Prevention Assessment for Community Threats
   Eleana Asimakopoulou, Nik Bessis

12:30 – 14:00 Lunch Break
14:00 – 15:30 Parallel Sessions

3PGCIC-S2: Security, Dependability and Reliability– Room 3PGCIC 1
Chair: Richard Hill, University of Derby, UK
1. Distributed Placement of Replicas in Hierarchical Data Grids with User and System QoS
   Constraints
   Mohammad Shorfuzzaman, Peter Graham, Rasit Eskicioglu
2. A New Dynamic Replication Algorithm for Hierarchy Networks in Data Grid
   N. Mansouri, Gh. Dastghaibyfard
3. Suitability of Cloud Computing for Scientific Data Analyzing Applications; An Empirical Study
   Alireza Angabini, Nasser Yazdani, Thomas Mundt, Fatemeh Hassani
4. Improving Query Delay in Private Web Search
   Cristina Romero-Tris, Alexandre Viejo, Jordi Castellà-Roca

W-BIDS-S1: Business, Intelligent and Distributed Systems – Room 3PGCIC 1
Chair: Kin Fun Li, University of Victoria, Canada
1. Enabling Business Rules for Concurrent Transactions
   Hendrik Decker, Rubén de Juan-Marín
2. An Efficient Schema Shared Approach for Cloud Based Multitenant Database with Authentication and Authorization Framework
   Sanjeev Pippal, Vishu Sharma, Shakti Mishra, D.S. Kushwaha
3. The Design and Implementation of a Business Intelligence Recommender
   Kin Fun Li, Graham Campbell, Allan Kumka, Chris Nesmith
15:30 – 16:00 Coffee Break
16:00 – 17:30 Parallel Sessions

3PGCIC-S3: Virtual Organizations, Enterprise and Cloud Computing - Room 3PGCIC 1

Chair: Fatos Xhafa, Technical University of Catalonia, Spain

1. Towards Inter-cloud Schedulers: A Survey of Meta-scheduling Approaches
   Stelios Sotiriadis, Nik Bessis, Nick Antonopoulos

2. Evaluating the Robustness of Publish/Subscribe Systems
   Tobias R. Mayer, Lionel Brunie, David Coquil, Harald Kosch

3. Integration of Wireless Hand-Held Devices with the Cloud Architecture: Security and Privacy Issues
   Muhammad Sarwar Jahan Morshed, Mohammad Maynul Islam, Mohammad Kamrul Huq, Md. Shahadat Hossain, Mohammad Ariful Basher

4. A P2P-Based Incremental Web Ranking Algorithm
   Sumalee Sangamuang, Pruet Boonma, Juggapong Natwichai

W-MWVRTA-S1: Multimedia Systems and Applications - Room 3PGCIC 2

Chair: Leonard Barolli, Fukuoka Institute of Technology, Japan

1. A Preliminary Evaluation for User Interfaces According to User Computer Skill and Computer Specifications
   Shinichi Inenaga, Kaoru Sugita, Tetsushi Oka, Masao Yokota

2. Experiment on Multi-video Transmission with Multipoint Tiled Display Wall
   Yasuo Ebara

3. A Study on Design of Disaster Information - A Proposal of Coordinate System for Supply and Demand on Disaster Recovery
   Daisuke Endo, Kaoru Sugita

   Noriki Uchida, Kazuo Takahata, Yoshitaka Shibata

19:00 – 21:00 Welcome Reception Party
09:00 – 10:30 Parallel Sessions

3PGCIC-S4: Data Intensive Computing and Data Mining - Room 3PGCIC 1
Chair: Kin Fun Li, University of Victoria, Canada

1. Hybrid Architecture for Intensive Data Analysis
   O. Terzo, L. Mossucca, P. Ruiu, G. Caragnano

2. FPGA-Based Reconfigurable Hardware for Compute Intensive Data Mining Applications
   Darshika G. Perera, Kin Fun Li

3. The Web Information Extraction for Update Summarization Based on Shallow Parsing
   Min Peng, Xiaoxiao Ma, Ye Tian, Yang Ming, Hua Long, Quanchen Lin, Xiaojun Xia

W-SMDMS-S1: Stream Delivery and Processing - Room 3PGCIC 2
Chair: Tomoki Yoshihisa, Osaka University, Japan

1. Efficient Invocation of Transaction Sequences Triggered by Data Streams
   Masafumi Oyamada, Hideyuki Kawashima, Hiroyuki Kitagawa

2. A Video Manager for Relational Stream Processing Systems
   Tsubasa Takahashi, Hideyuki Kawasima, Hiroyuki Kitagawa

3. A Scheduling Method for Selective Contents Broadcasting with Fast-Forwarding
   Yusuke Gotoh, Tomoki Yoshihisa, Hideo Taniguchi, Masanori Kanazawa, Wenny Rahayu, Yi-Ping Phoebe Chen

4. Video Transmission in Multicast Networks Using Network Coding
   César Cabrera-Medina, Francisco de Asís López-Fuentes

10:30 – 11:00 Coffee break

11:00 – 12:30 Parallel Sessions

3PGCIC-S5: Web Applications and Performance Evaluations - Room 3PGCIC 1
Chair: Heinz Kredel, University of Mannheim, Germany

1. Performance Analysis and Performance Modeling of Web-Applications
   Heinz Kredel, Hans-Günther Kruse, Ingo Ott

2. Private Audio Streaming for an Automated Phone Assistance System
   Juan Vera-del-Campo, Ana Gómez-Muro, Miguel Soriano

3. A New Approach to Grid Computing for Distributed Rendering
   Carlos Glez-Morcillo, D. Vallejo, J. Albusac, L. Jiménez, J.J. Castro-Sanchez

4. Low-Cost High Performance Infrastructure for Domain-Decomposition Methods in Computational Electromagnetics

24
W-SMDMS-S2: Video Delivery Systems – Room 3PGCIC 2
Chair: Tomoki Yoshihisa, Osaka University, Japan

1. An Energy Saving Scheme on Storage Systems for Video Delivery Services
   Yousuke Watanabe, Haruo Yokota

2. P2P Live Streaming System with Content Recommendation Based on Users’ Preference
   Yusuke Hirota, Takayuki Hisada, Hideki Tode, Koso Murakami

3. Photographable TV: An Interactive Internet Live Broadcasting System with a High-Quality Snapshot Function
   Yoshia Saito, Yuko Murayama

12:30 – 14:00 Lunch Break
14:00 – 15:30 Parallel Sessions

3PGCIC-S6: Grid Scheduling – Room 3PGCIC 1
Chair: Fatos Xhafa, Technical University of Catalonia, Spain

1. Multiobjective Scheduling on Distributed Heterogeneous Computing and Grid Environments Using a Parallel Micro-CHC Evolutionary Algorithm
   Sergio Nesmachnow, Santiago Iturriaga

2. A Novel Job Scheduling Algorithm for Improving Data Grid’s Performance
   N. Mansouri, Gh. Dastghaibyfard, A. Horri

   Fatos Xhafa, Joanna Kolodziej, Leonard Barolli, Vladi Kolici, Rozeta Miho, Makoto Takizawa

W-DCG-Al-S1: Distributed and Parallel Computer Graphics and Artificial Intelligence—Room 3PGCIC 2
Chair: Carlos González Morcillo, University of Castilla-La Mancha, Spain

1. Leveraging Common-Sense in Human Activity Recognition
   Maria J. Santofimia, Xavier del Toro, Jesus Barba, Felix J. Villanueva, Juan Carlos López

2. Distributed Reconfigurable Hardware for Image Processing Acceleration
   Julio D. Dondo, Jesús Barba, Fernando Rincón, Francisco Sánchez, David D. Fuente, Juan C. López

3. Process-in-Network for Image Providing Services

4. Distributed Rendering of Images through Intelligent Task Distribution
   David Vallejo, C. Glez-Morcillo, J. Angulo, J. Albusac
3PGCIC-S7: Distributed Systems – Room 3PGCIC 1

Chair: Antonio Gentile, University of Palermo, Italy

1. Contact Synchronization for the Android Platform
   Vicent Seguí Pascual, Fatos Xhafa

2. Simulation of Infiniband Networks and Efficiency Calculation on Non-blocking Fully Populated Fat-Tree Topology
   Gitanjali Sachdeva, Abhishek Patel, Henry Kasim, Simon See

3. Distributed E2E QoS-Based Path Computation Algorithm over Multiple Inter-domain Routes
   Nabil Bachir Djarallah, Nicolas Le Sauze, Hélia Pouyllau, Samer Lahoud, Bernard Cousin

4. How to Work with Android within a (FB-)Aodv Network
   Nicola Corriero, Angelo Mottola, Eustrat Zhupa

W-MiDiS-S1: Cloud Computing - Room 3PGCIC 1

Chair: Valentin Cristea, University of Politehnica Bucharest, Romania

1. Comparative Analysis of Multicore and Grid Based Execution of SWAT Model
   Diana D. Rodila, Victor Bacu, Dorian Gorgan

   Eliana-Dina Tîrșa, Mugurel Ionuț Andreica, Valentin Cristea, Nicolae Țăpuș

3. Policy Based Resource Allocation in Cloud Systems
   Elena Apostol, Cătălin Leordeanu, Valentin Cristea

4. Current Cloud Technologies Overview
   Eleonora Mocanu, Mugurel Ionuț Andreica, Nicolae Țăpuș

20:00 – 22:00 Conference Banquet
Friday, October 28, 2011

09:00 – 10:00 Single Session

BWCCA-2011/3PGCIC-2011 Keynote: Jordi Angusto, General Manager at Aerospace Research & Technology Centre (CTAE), Spain

“Why innovate? Where innovate?”

10:00 – 10:30 Coffee Break

10:30 – 12:00 Parallel Sessions

3PGCIC-S8: Ad-hoc, P2P and WSN – Room 3PGCIC 1

Chair: Florin Pop, University Politehnica of Bucharest, Romania

1. Towards a Framework for the Evaluation of Efficient Provisioning in Opportunistic Ad Hoc Networks
   Anthony Smith, Richard Hill

2. Random Walk Search on Concatenated Hop-Limited Trees Embedded into Unstructured P2Ps
   Shigeo Shioda, Phouvieng Hieungmany

3. Securing Vehicular Networks Based on Data-Trust Computation
   Sînziana Mazilu, Mihaela Teler, Ciprian Dobre

W-SMECS-S1: Simulations and Modelling I – Room 3PGCIC 2

Chair: Fatos Xhafa, Technical University of Catalonia, Spain

1. Simulation Analysis of CMS Data Replication and Production Activities
   Ciprian Dobre, Valentin Cristea

2. MIDI Pulse Width Modulation Application
   Dalibor Slovák

3. Time Series Pattern Recognition via SoftComputing
   Martin Kotyrba, Zuzana Oplatkova, Eva Volna, Roman Senkerik, Vaclav Kocian, Michal Janosek

4. Modeling and Simulation of a Shock Absorbing Shell for Ballistic Vests and Helmets to Achieve Optimal Protection
   Claudiu Valentin Suciu, Shuuhei Fukui, Yuuta Kimura

12:00 – 13:30 Parallel Sessions
W-MiDiS-S2: P2P and Context-Aware Computing – Room 3PGCIC 2
Chair: Valentin Cristea, University of Politehnica Bucharest, Romania
1. Using Bio-inspired Models to Design Peer-to-Peer Overlays
   Bogdan Ghit, Florin Pop, Valentin Cristea
2. Strategies for Assigning Virtual Geometric Node Coordinates in Peer-to-Peer Overlays
   Ana-Delia Sâmbotin, Mugurel Ionuț Andreica, Eleonora Mocanu
3. Evaluation of Optimistic Replication Techniques for Dynamic Files in P2P Systems
   Alina-Diana Potlog, Fatos Xhafa, Florin Pop, Valentin Cristea
4. CAPIM: A Platform for Context-Aware Computing
   Ciprian Dobre

W-SMECS-S2: Simulation and Modelling II – Room 3PGCIC 2
Chair: Zuzana Oplatkova, Tomas Bata University in Zlin, Czech Republic
1. Classification with Pseudo Neural Networks Based on Evolutionary Symbolic Regression
   Zuzana Oplatkova, Roman Senkerik
2. Modeling and Simulation of a Vehicle Suspension with Variable Damping and Elastic Properties versus the Excitation Frequency
   Claudiu Valentin Suciu, Tsubasa Tobiishi, Ryouta Mouri
3. CLEM - A Cloud Based Learning Environment for Millennial: Learn - Anytime, Anywhere
   Mayur Patil, Vishal Kulkarni, Govind Negalur, Anand Pashupatimath
4. Fault Tolerance in Cluster Computing System
   Ashwini Patil, Ankit Shah, Sheetal Gaikwad, Akassh A Mishra, Simranjit Singh Kohli, Sudhir Dhage

13:30 – 14:30 Lunch Break
Additional Information

Travel to Conference Venue

BWCCA-2011 and 3PGCIC-2011 will be held at the Technical University of Catalonia (UPC), Barcelona, Spain.

The exact address is: Edifici Vèrtex - Plaça Eusebi Güell, 6 08034 Barcelona, Spain.

Venue Access

The nearest subway station is Palau Reial, Line 3 (L3, green), a short walk from the conference venue. It is the most convenient transportation method and this line can be easily reached at the city center.

Access from other transportation methods

- Barcelona International Airport, El Prat: 14 km, about 20 minutes by car or taxi.
- Sants train station: 3,5 km. About 10 minutes, by taxi or subway (Sants, L3).
- Harbor: 17 km, about 20 minutes by taxi or subway (Drassanes, L3).
- Bus lines: 7, 33, 54, 60, 67, 68, 74, 75, 78 i 113.

Social Events

Welcome Reception Party:

Institut d'Estudis Catalans, Carrer del Carme, 47, 08001 Barcelona. http://www.iec.cat/

How to get there from conference venue

► From Subway Stop “Palau Reial” (L3, Direction Trinitat Nova) close to conference venue
► STOP at Plaça Catalunya (15 min, 12 stops)
► Walk to Carrer del Carme, Nº47, 7 min approx (650 m)

Banquet Party

Catalonia Barcelona Plaza

Getting there

Line 1: Plaça Espanya station (calle de la Creu Coberta exit)
Line 3: Parada de Plaça Espanya (salida calle de la Creu Coberta)
Bus stop for buses numbers 27 / 30 / 23 / 9 / 37 / 79 / 91 / 109 / 45 / 65 / 165
Taxi – 2 km (City centre)
City centre (2 km). €8/ approx./ taxi

Internet Access

The Internet access will be available during the Conferences days.

XSF-UPC
User: xsf.convidat
Password: Astero1de