IRISA, Rennes, France

August 28–31, 2007

# Euro-Par 2007

## 13th European Conference on Parallel Computing

# Program

# 1

# Workshops Program

## Euro-Par Workshops at a glance

| | Tuesday 28 | | | | | | |
|---|---|---|---|---|---|---|---|
| 8:30 | Registration Euro-Par Workshops | | | | | | 8:30 |
| 9:00 | GECON I 60 | UNICORE I 51 | HPPC I 53 | VHPC I 52 | CoreGRID **Invited talk** - amphi P | | 9:00 |
| 9:30 | | | | | | | 9:30 |
| 10:00 | | | | | *Coffee Break* | | 10:00 |
| 10:30 | *Coffee Break* | | | | S4A amphi P | S4B I 50 | 10:30 |
| 11:00 | GECON I 60 | UNICORE I 51 | HPPC I 53 | VHPC I 52 | | | 11:00 |
| 11:30 | | | | | | | 11:30 |
| 12:00 | | | | | **Closing session** | | 12:00 |
| 12:30 | *Lunch / Buffet* | | | | *hall exam Bat 2* | | 12:30 |
| 13:00 | | | | | | | 13:00 |
| 13:30 | | | | | | | 13:30 |
| 14:00 | GECON I 60 | UNICORE I 51 | HPPC I 53 | | | MGA meeting amphi P | 14:00 |
| 14:30 | | | | | | | 14:30 |
| 15:00 | | | | | | | 15:00 |
| 15:30 | *Coffee Break* | | | | | | 15:30 |
| 16:00 | GECON I 60 | UNICORE I 51 | | | | | 16:00 |
| 16:30 | | | | | | | 16:30 |
| 17:00 | | | | | | | 17:00 |
| 17:30 | *Break* | | | | | | 17:30 |
| 18:00 | GECON I 60 | *Euro-Par welcome cocktail* | | | | | 18:00 |
| 18:30 | | | | | | | 18:30 |
| 19:00 | *hall exam Bat 2* | | | | | | 19:00 |
| 19:30 | | | | | | | 19:30 |
| 20:00 | | | | | | | 20:00 |

# GECON – Grid Economics and Business Models

## Tuesday, 28 Aug. 2007

Chair: Jorn Altmann

**9:00 – 19:15 / Room I 60**

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| **8:45 – 9:00** | Welcome |
| **9:00 – 10:30** | **Keynote Speakers**<br>*Prof. Dr. Wolfgang Gentzsch, D-Grid General Coordinator* |
| **10:30 – 11:00** | Coffee Break |
| **11:00 – 12:30** | **Session A: Grid Business Modeling**<br>• "Adopting the Grid for Business Purposes: The Main Objectives and the Associated Economic Issues"<br>*G. Thanos, C. Courcoubetis, G. Stamoulis*<br>• "Decision Factors of Enterprises for Adopting Grid Computing""<br>*J. Hwang, J. Park*<br>• "Taxonomy of Grid Business Models"<br>*J. Altmann, M. Ion, A. Bany Mohammed*<br>• "Development of a Generic Value Chain for the Grid Industry"<br>*K. Stanoevska-Slabeva, C. Figà Talamanca, G. Thanos; C. Zsigri* |
| **12:30 – 14:00** | Lunch |
| **14:00 – 15:30** | **Session B: Market Mechanisms for the Grid**<br>• "Strategies for the Service Market Place"<br>*P. McKee, S. Taylor, M. Surridge, R. Lowe, C. Ragusa*<br>• "Prediction-Based Enforcement of Performance Contracts"<br>*Th. Sandholm, K. Lai*<br>• "DFCA: A Flexible Refundable Auction for Limited Capacity Suppliers"<br>*Z. Huang, S. Matsubara*<br>• "A Comparative Analysis of Single-Unit Vickrey Auctions and Commodity Markets for Realizing Grid Economies with Dynamic Pricing"<br>*K. Vanmechelen, J. Broeckhove* |
| **15:30 – 16:00** | Coffee Break |
| **16:00 – 17:30** | **Session C: Economic Grid Service Provisioning**<br>• "A Continuation-Based Framework for Economy-Driven Grid Service Provision"<br>*M. Giordano, C. Di Napoli*<br>• "On Business Grid Demands and Approaches"<br>*C. Franke, A. Hohl, Ph. Robinson, B. Scheuermann*<br>• "Enabling the Simulation of Service-Oriented Computing and Provisionning Policies for Autonomic Utility Grids"<br>*M. Dias de Assunção, W. Streitberger, T. Eymann, R. Buyya*<br>• "Managing a Peer-to-Peer Backup System: Does Imposed Fairness Socially Outperform a Revenue-Driven Monopoly?"<br>*L. Toka, P. Maillé* |
| **17:30 – 17:45** | Coffee Break |
| **17:45 – 19:15** | **Session D: Research Projects on Grid Economics**<br>• "E-Business in ArguGrid"<br>*F. Toni*<br>• "AssessGrid: Economic Issues Underlying Risk Awareness in Grids"<br>*K. Voss, K. Djemame, I. Gourlay, J. Padgett*<br>• "CatNets: Open Market Approaches for Self-Organizing Grid Resource Allocation"<br>*T. Eymann, W. Streitberger, S. Hudert*<br>• "The edutain@grid Project"<br>*Th. Fahringer, Ch. Anthes, A. Arragon, A. Lipaj, J. Müller-Iden, Ch. Rawlings, R. Prodan, M. Surridge*<br>• "GridEcon – The Economic-Enhanced Next-Generation Internet"<br>*J. Altmann, C. Courboubetis, J. Darlington, J. Cohen*<br>• "SORMA – Building an Open Grid Market for Grid Resource Allocation"<br>*D. Neumann, J. Stoesser, A. Anandasivam, N. Borissov* |

## UNICORE Summit

**Tuesday, 28 Aug. 2007**

Chair: Achim Streit

**9:00 – 17:30 / Room I 51**

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|---|---|
| | **Opening Session** |
| **9:00 – 9:10** | • Opening<br>*A. Streit, W. Ziegler* |
| **9:10 – 9:20** | • Launch of UNICORE 6.0<br>*B. Schuller, A. Streit* |
| **9:20 – 10:30** | • "Internet-Scale Identity and Collaboration"<br>*K. Klingenstein* |
| **10:30 – 11:00** | Coffee Break |
| | **Benchmarking, Architecture** |
| **11:00 – 11:30** | • "Grid Interoperability with OMII-Europe"<br>*A. Dunlop* |
| **11:30 – 12:00** | • "A Black-Box Approach to Performance Analysis of Grid Middleware"<br>*P. Alexius, B. M. Elahi, F. Hedman, Ph. Mucci, G. Netzer, Z. A. Shah* |
| **12:00 – 12:30** | • "UNICORE/w3"<br>*R. Menday, B. Hagemeier* |
| **12:30 – 14:00** | Lunch |
| | **Application** |
| **14:00 – 14:30** | • "Chemomentum – UNICORE 6 based infrastructure for complex applications in science and technology"<br>*B. Schuller, B. Demuth, H. Mix, K. Rasch, M. Romberg, S. Sild, U. Maran, P. Bala, E. del Grosso, M. Casalegno, N. Piclin, M. Pintore, W. Sudholt, K. Baldrige* |
| **14:30 – 15:00** | • "A Business-Oriented Grid Workflow Management System"<br>*L. Clementi, C. Cacciari, M. Melato, R. Menday, B. Hagemeier* |
| **15:00 – 15:30** | • "Flexible Streaming Infrastructure for Unicore"<br>*K. Benedyczak, A. Nowinski, P. Bala* |
| **15:30 – 16:00** | Coffee Break |
| | **AAI, Security** |
| **16:00 – 16:30** | • "Extending UNICORE 5 Authentication Model by Supporting Proxy Certificate Profile Extensions"<br>*K. Stamou, F. Hedman, A. Iliopoulos* |
| **16:30 – 17:00** | • "Using SAML-Based VOMS for Authorization within Web Services-Based UNICORE Grids"<br>*V. Venturi, M. Riedel,, Shiraz Memon, Shahbaz Memon, F. Stagni, B. Schuller, D. Mallmann, B. Tweddell, A. Gianoli, V. Ciaschini, S. Van de Berghe, D. Snelling, A. Streit* |
| **17:00 – 17:30** | • "Attributes and Vos: Extending the UNICORE Authorisation Capabilities"<br>*A. Faroughi, R. Faroughi, Ph. Wieder, W. Ziegler* |

## VHPC – Virtualization/Xen in HPC Cluster and Grid Computing Environments

**Tuesday, 28 Aug. 2007**

Chair: Michael Alexander

**9:00 – 13:30 / Room I 52**

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| **9:00 – 9:20** | • "Virtualization Techniques in Network Emulation Systems"<br>*R. Canonico, P. Di Gennaro, V. Manetti, G. Ventre* |
| **9:20 – 9:40** | • "SOA Based Control Plane for Virtual Cluster"<br>*P. Anedda, M. Gaggero, S. Manca, G. Zanetti* |
| **9:40 – 10:00** | • "Grid Virtual Laboratory Architecture"<br>*M. Bertogna, E. Grosclaude, F. Lopez Luro* |
| **10:00 – 10:20** | • "Information Service of Virtual Machine Pools for Grid Computing"<br>*M. Kunze, L. Wang* |
| **10:30 – 11:00** | Coffee Break |
| **11:00 – 11:20** | • "Virtual Cluster Management with Xen"<br>*N. Bhatia, J. Vetter* |
| **11:20 – 11:40** | • "XSM: Deploying, Managing and Monitoring Xen Sites"<br>*M. Storch, T. Ferreto, F. Franciosi, C. De Rose, J. Orengo, F. Grazziotin* |
| **11:40 – 12:00** | • "Automatic Xen Management with SmartFrog: On-Demand Supply of Heterogeneous, Synchronized Execution Environments"<br>*X. Grehant, O. Pernet, S. Jarp, I. Demeure, P. Toft* |
| **12:00 – 12:20** | • "Nash Genetic Optimization for Resource Scheduling in Grid Virtual Machine Environments"<br>*M. Alexander* |
| **12:20 – 12:40** | • "Integrating Xen with the Quattor Fabric Mangement System"<br>*S. Childs, B. Coghlan* |
| **12:40 – 13:00** | • "Performance Impact of Xen on Communication-Centric HPC"<br>*R. Faucette* |
| **13:00 – 13:30** | • "Getting 10 Gb/s from Xen: Safe and Fast Device Access from Unprivileged Domains"<br>*K. Mansley, G. Law, D. Riddoch, G. Barzini, N. Turton, S. Pope* |

# HPPC – Highly Parallel Processing on a Chip

**Tuesday, 28 Aug. 2007**

Chairs: Jesper Träff – Martti Forsell

**9:00 – 15:30 / Room I 53**

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|---|---|
| | **Session 1: Alternative Computing Paradigms for CMPs** |
| **9:00 – 9:15** | • Opening notes<br>*J.Träff, M.Forsell – NEC Europe, VTT* |
| **09:15 – 10:05** | • "Towards realizing a PRAM-on-Chip Vision" - Keynote<br>*U. Vishkin – UMIACS, University of Maryland* |
| **10:05 – 10:30** | • "An Asynchronous many-core Dataflow Processor for D3AS Prototype"<br>*L. Verdoscia, R. Vaccaro - ICAR-CNR Italy* |
| **10:30 – 11:00** | Coffee Break |
| | **Session 2: Transactional Memory and Caching Solutions** |
| **11:00 – 11:25** | • "Hardware Transactional Memory with Operating System Support"<br>*S. Tomic, A. Cristal, O. Unsal, M. Valero* |
| **11:25 – 11:50** | • "Auto-Parallelisation of Sieve C++ Programs"<br>*A. Donaldson, C. Riley, A. Lokhmotov, A. Cook* |
| **11:50 – 12:15** | • "Adaptive L2 Cache for Chip Multiprocessors"<br>*D. Benitez, J. C. Moure, D. I. Rexachs, E. Luque* |
| **12:15 – 12:40** | • "COMA Cache Hierarchy for Microgrids of Microthreaded Cores"<br>*L. Zhang, Ch. Jesshope* |
| **12:40 – 14:00** | Lunch |
| | **Session 3: Language Support and CMP Future Directions** |
| **14:00 – 14:25** | • "Parallelization of Bulk Operations for STL Dictionaries"<br>*L. Frias, J. Singler* |
| **14:25 – 15:15** | • "Societies of Cores and their Computing Culture" - keynote<br>*Th. Sterling - Louisiana State University* |
| **15:15 – 15:30** | • Closing notes<br>*J.Träff, M.Forsell – NEC Europe, VTT* |

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# Conference Program

## Euro-Par Program at a glance

Tuesday 28th Aug.: **Welcome Reception** from 6 pm on campus

| | Wednesday 29 | Thursday 30 | Friday 31 | |
|---|---|---|---|---|
| 8:30 | Registration Euro-Par | | | 8:30 |
| 9:00 | | S10 \| 60 | S20 \| 60 | 9:00 |
| 9:30 | Conference opening | S11 \| 52 | S21 \| 50 | 9:30 |
| 10:00 | **Invited Talk** | S12 \| 51 | S22 \| 52 | 10:00 |
| 10:30 | R. Guerraoui - amphi P | S13 \| 50 | S23 \| 51 | 10:30 |
| 11:00 | *Coffee Break* | S14 \| 53 | *Coffee Break* | 11:00 |
| 11:30 | **Invited Talk** | S15 \| 60 | S24 \| 60 | 11:30 |
| 12:00 | S. Hand - amphi P | S16 \| 52 | S25 \| 51 | 12:00 |
| 12:30 | *Lunch* | S17 \| 51 | S26 \| 52 | 12:30 |
| 13:00 | | S18 \| 50 | S27 \| 50 | 13:00 |
| 13:30 | | S19 \| 53 | *Lunch* | 13:30 |
| 14:00 | S1 \| 60 | *Lunch* | **Invited Talk** | 14:00 |
| 14:30 | S2 \| 52 | **Euro-Par Forum** amphi P | A.Seznec - amphi P | 14:30 |
| 15:00 | S3 \| 51 | **Best Paper Session** amphi P | **Closing remarks** | 15:00 |
| 15:30 | S4 \| 50 | | | 15:30 |
| 16:00 | S5 \| 53 | Excursion to le **Mont Saint-Michel** | | 16:00 |
| 16:30 | *Coffee Break* | | | 16:30 |
| 17:00 | S6 \| 60 | | | 17:00 |
| 17:30 | S7 \| 52 | | | 17:30 |
| 18:00 | S8 \| 51 | | | 18:00 |
| 18:30 | S9 \| 50 | | | 18:30 |
| 19:00 | **Euro-Par Welcome Cocktail** Rennes City Hall | **Banquet** Restaurant "Le Relais Saint-Michel" | | 19:00 |
| 19:30 | | | | 19:30 |
| 20:00 | | | | 20:00 |
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| 21:00 | | | | 21:00 |
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| 22:00 | | | | 22:00 |
| 22:30 | | | | 22:30 |
| 23:00 | | | | 23:00 |

# Euro-Par Detailed Program

## Wednesday, 29 Aug. 2007 – Opening Session

**8:30** Registration Opening

**9:30** Conference Opening

**10:00-12:30**

| Amphitheater P | |
|---|---|
| **10:00** | Invited Talk<br>**Rachid Guerraoui -** *EPFL (Switzerland)*<br>"Sommersby: Transactions are back: but are they the same?" |
| **11:00** | Coffee Break |
| **11:30** | Invited Talk<br>**Steve Hand** - *University of Cambridge (UK)*<br>"Virtualizing the Data Center with Xen" |
| **12:30** | Lunch |

## Wednesday, 29 Aug. 2007 – Technical Session A

## 14:00-16:00

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|---|---|
| **Room I 60 –** Session 1<br>**Theory –** Topic 12<br>Chair: Pascal Felber | **14:00**<br>• 2D Cutting Stock Problem: a New Parallel Algorithm and Bounds<br>*Coromoto L., Gara M., Rodriguez C., Segura C.*<br>**14:30**<br>• Periodic Load Balancing on the N-Cycle: Analytical and Experimental Evaluation<br>*Riess C., Wanka R.*<br>**15:00**<br>• Hirschberg's Algorithm on a GCA and its Parallel Hardware Implementation<br>*Jendrsczok J., Hoffmann R., Keller J.*<br>**15:30**<br>• Acyclic Preference Systems in P2P Networks<br>*Gai A.-T., Lebedev D., Mathieu F., de Montgolfier F., Reynier J., Viennot L.* |
| **Room I 52 -** Session 2<br>**High Performance** – Topic 4<br>Chair: François Bodin | **14:00**<br>• Program Behavior Characterization through Advanced Kernel Recognition<br>*Arenaz M., Touriño J., Doallo R.*<br>**14:30**<br>• Towards Real-Time Compression of Hyperspectral Images Using Virtex-II FPGAs<br>*Plaza A.*<br>**15:00**<br>• Optimizing Chip Multiprocessor Work Distribution using Dynamic Compilation<br>*Zhao J., Horsnell M., Rogers I., Dinn A., Kirkham C., Watson I.*<br>**15:30**<br>• Compositional Approach applied to Loop Specialization<br>*Djoudi L., Acquaviva J.-T., Barthou D.* |
| **Room I 51 -** Session 3<br>**Distributed Systems** – Topic 8<br>Chair: Achour Mostefaoui | **14:00**<br>• Accelerate Data Sharing in a Wilde-Area Networked File Storage System<br>*Zhang K., Yu H., Zhao J., Zheng W.*<br>**14:30**<br>• Esodyp+: Prefetching in the Jackal Software DSM<br>*Klemm M., Beyler J.-C., Lampert R., Philippsen M., Clauss P.*<br>**15:00**<br>• Modeling and Validating the Performance of Atomic Broadcast Algorithms in High Latency Networks<br>*Ekwall R., Schiper A.*<br>**15:30**<br>• A Joint Data and Computation Scheduling Algorithm for the Grid<br>*Dong F., Akl S.* |

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| **Room I 50 -** Session 4<br>**Software Computing** – Topic 6<br>Chair: Ramin Yahyapour | **14:00**<br>• Evaluation of a Utility Computing Model Based on the Federation of Grid Infrastructures<br>*Vazquez T., Huedo E., Montero R., Llorente I.*<br>**14:30**<br>• The Characteristics and Performance of Groups of Jobs in Grids<br>*Iosup A., Jan M., Sonmez O., Epema D.*<br>**15:00**<br>• Vigne: Executing Easily and Efficiently a Wide Range of Distributed Applications in Grids<br>*Jeanvoine E., Morin C., Leprince D.*<br>**15:30**<br>• Are P2P Data-Dissemination Techniques Viable in Today's Data-Intensive Scientific Collaborations?<br>*Al Kiswany S., Ripeanu M., Iamnitchi A., Vazhkudai S.* |
| **Room I 53 -** Session 5<br>**Mobility** – Topic 14<br>Chair: Pascale Vicat-Blanc Primet | **14:00**<br>• Securing Sensor Reports in Wireless Sensor Networks<br>*Khan Pathan A.-S., Hong C.*<br>**14:30**<br>• An Algorithm for Dissemination and Retrieval of Information in Wireless Ad Hoc Networks<br>*Miranda H., Leggio S., Rodrigues L., Raatikainen K.*<br>**15:00**<br>• Surrendering Autonomy: Can Cooperative Mobility Help?<br>*Ben Brahim G., Khan B., Al-Fuqaha A., Guizani M., Kountanis D.* |
| | **16:00 – 16:30**<br>Coffee Break |

## Wednesday, 29 Aug. 2007 – Technical Session B

## 16:30-18:00

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| **Room I 60 -** Session 6<br>**Theory -** Topic 10<br>Chair: Bernard Philippe | **16:30**<br>• An Efficient Parallel Particle Tracker for Advection-Diffusion Simulations in Heterogeneous Porous Media<br>*Beaudouin A., de Dreuzy J.-R., Erhel J.*<br>**17:00**<br>• A Fully Scalable Parallel Algorithm for Solving Elliptic Partial Differential Equations<br>*Acebron J., Spigler R.*<br>**17:30**<br>• Locality Optimized Shared-Memory Implementations of Iterated Runge-Kutta Methods<br>*Korch M., Rauber T.* |
| **Room I 52 -** Session 7<br>**High Performance** – Topic 4/11<br>Chair: Harald Kosh | **16:30**<br>• Starvation-Free Transactional Memory System<br>*Waliuullah M., Stenstrom P.*<br>**17:00**<br>• DynaPeer: A Dynamic Peer-to-Peer Based Delivery Scheme for VoD Systems<br>*Coelho L., Cores F., Yang X. Y., Ripoll A.*<br>**17:30**<br>• An Evaluation of Parallelization Concepts for Baseline-Profile compliant H. 264 / AVC Decoders<br>*Schöffmann K., Fauster M., Lampl O., Böszörmenyi L.* |
| **Room I 51 -** Session 8<br>**Distributed Systems** – Topic 7<br>Chair: Fabrice Le Fessant | **16:30**<br>• Path Query Routing in Unstructured Peer-to-Peer Networks<br>*Bonnel N., Ménier G., Marteau P.-F.*<br>**17:00**<br>• Processing Top-k Queries in Distributed Hash Tables<br>*Akbarinia R., Pacitti E., Valduriez P.*<br>**17:30**<br>• A Structured Overlay for Multi-Dimensional Range Queries<br>*Schuett T., Schintke F., Reinefeld A.* |
| **Room I 50 -** Session 9<br>**Software Computing** – Topic 2/1<br>Chair: Marios Dikaiakos | **16:30**<br>• TAUoverSupermon: Low-Overhead Online Parallel Performance Monitoring<br>*Nataraj A., Sottile M., Morris A., Malony A., Shende S.*<br>**17:00**<br>• Practical Differential Profiling<br>*Schulz M., de Supinski B.*<br>**17:30**<br>• Automatic Generation of Dynamic Tuning Techniques<br>*Caymes-Scutari P., Morajko A., Margalef T., Luque E.* |

**19:00 Welcome Cocktail offered by Rennes City Hall**

## Thursday, 30 Aug. 2007 – Technical Session C

## 9:00-10:30

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| **Room I 60 -** Session 10<br>**Theory –** Topic 10<br>Chair: Jocelyne Erhel | **9:00**<br>• Toward Scalable Matrix Multiply on Multihreaded Architectures<br>*Marker B., Van Zee F., Goto K., Quintana-Orti G., Van de Gejin R.*<br>**9:30**<br>• Task Scheduling for Parallel Multifrontal Methods<br>*Beaumont O., Guermouche A.* |
| **Room I 52 -** Session 11<br>**Software Computing** – Topic 9<br>Chair: George Bosilca | **9:00**<br>• Delayed side-effects ease multi-core programming<br>*Lokhmotov A., Mycroft A., Richards A.*<br>**9:30**<br>• Management in Distributed Systems: a semi-formal approach<br>*Aldinucci M., Danelutto M., Kilpatrick P.*<br>**10:00**<br>• Nested Parallelism in the OMPi OpenMP/C Compiler<br>*Hadjidoukas P., Dimakopoulos V.* |
| **Room I 51 -** Session 12<br>**Distributed Systems** – Topic 7<br>Chair: Dick Epema | **9:00**<br>• Asynchronous Distributed Power Iteration with Gossip-based Normalization<br>*Jelasity M., Canright G., Engo-Monsen K.*<br>**9:30**<br>• Capitalizing on Free Riders in P2P Networks<br>*Joung Y.-J., Chiu T., Chen S. M.*<br>**10:00**<br>• Content Based Publish / Suscribe using Distributed R-Trees<br>*Bianchi S., Felber P., Gradinariu M.* |
| **Room I 50 -** Session 13<br>**Software Computing** – Topic 6<br>Chair: Rosa M. Badia | **9:00**<br>• Increasing Parallelism for Workflows in the Grid<br>*Marti J., Malo J., Cortes T.*<br>**9:30**<br>• Persistent Fault-Tolerance for Divide-and-Conquer Applications on the Grid<br>*Wrzesinka G., Oprescu A.-M., Kielmann T., Bal H.*<br>**10:00**<br>• Adaptable Distance-Based Decision-Making Support in Dynamic Cross-Grid Environment<br>*Gossa J.* |
| **Room I 53 -** Session 14<br>**Software Computing** – Topic 1<br>Chair: Eric Focht | **9:00**<br>• A Scheduling Toolkit for Multiprocessor-Task Programming with Dependencies<br>*Dümmler J., Kunis R., Rünger G..*<br>**9:30**<br>• Makefile: Parallel Dependency Specification Language<br>*Simões A., Fonseca R., Almeida J. J.*<br>**10:00**<br>• Building Portable Thread Schedulers for Hierarchical Multiprocessors: the BubbleSched Framework<br>*Thibault S., Namyst R., Wacrenier P.-A.* |
| | **10:30 – 11:00**<br>Coffee Break |

## Thursday, 30 Aug. 2007 – Technical Session D

## 11:00-12:30

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| **Room I 60 -** Session 15<br>**Load Balancing –** Topic 3<br>Chair: Luc Bougé | **11:00**<br>• Toward Optimizing Latency under Throughput Constraints for Application Workflows on Clusters<br>*Vydyanathan N., Catalyurek U., Kurc T., Sadayappan P., Saltz J.*<br>**11:30**<br>• Load Balancing on an Interactive Multiplayer Game Server<br>*Cordeiro D., Goldman A., Da Silva D.*<br>**12:00**<br>• A Parallelisable Multi-Level Banded Diffusion Scheme for Computing Balanced Partitions with Smooth Boundaries<br>*Pellegrini F.* |
| **Room I 52 -** Session 16<br>**Software Computing** – Topic 1<br>Chair: Christine Morin | **11:00**<br>• A Profiling Tool for Detecting Cache-Critical Data Structures<br>*Tao J., Gaugher T., Karl W.*<br>**11:30**<br>• On Using Incremental Profiling for the Performance Analysis of Shared Memory Parallel Applications<br>*Fuerlinger K., Gerndt M., Dongarra J.*<br>**12:00**<br>• Fine Tuning Algorithmic Skeletons<br>*Caromel D., Leyton M.* |
| **Room I 51 -** Session 17<br>**Distributed Systems** – Topic 5<br>Chair: Patrick Valduriez | **11:00**<br>• A Multi-Layer Collaborative Cache for Question Answering<br>*Dominguez-Sal D., Larriba-Pey J. L., Surdeanu M.*<br>**11:30**<br>• Handling Request Variability for QoS-max Measures<br>*Furtado P.*<br>**12:00**<br>• A Topology-Aware Approach for Distributed Data Reconciliation in P2P Networks<br>*El Dick M., Martins V., Pacitti E.* |
| **Room I 50 -** Session 18<br>**Mobility** – Topic 14<br>Chair: Nuno Preguica | **11:00**<br>• A Context-Dependent XML Compression Approach to Enable Business Applications on Mobile Devices<br>*Natchetoi Y., Wu H., Babin G.*<br>**11:30**<br>• A Distributed Leaderless Algorithm for Logical Location Discovery in Specknets<br>*McNally R., Arvind D. K.*<br>**12:00**<br>• Analysis of a Kalman Approach for a Pedestrian Positioning System in Indoor Environments<br>*Pulido Herrera E., Quirós R., Kaufmann H.* |

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| **Room I 53 -** Session 19<br>**High Performance** – Topic 13<br>Chair: Thilo Kielmann | **11:00**<br>• Fast and Efficient Total Exchange on Two Clusters<br>*Jeannot E., Steffenel L. A.*<br>**11:30**<br>• Performance Analysis of an Optical Circuit Switched Network for Peta-Scale Systems<br>*Barker K., Kerbyson D.*<br>**12:00**<br>• Network Fault Tolerance in Open MPI<br>*Shipman G., Graham R., Bosilca G.* |
| | **12:30 – 13:45**<br>Lunch |
| **Amphitheater P** | **13:45 – 14:30**<br>Euro-Par Forum |

## Thursday, 30 Aug. 2007 – Best Papers Session

## 14:30-15:45

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| **Amphitheater P**<br>**Best Papers Session**<br>Chair: Luc Bougé | **14:30**<br>• Integrated QoS Provision and Congestion Management for Interconnection Networks<br>*Martinez-Vicente A., Garcia P., Alfaro F., Sanchez J.-L., Flich J., Quiles F., Duato J.*<br>**15:00**<br>• Characterizing Result Errors in Internet Desktop Grids<br>*Kondo D., Araujo F., Domingues P., Moura Silva L., Fedak G., Cappello F.*<br>**15:30**<br>• Automatic Structure Extraction from MPI Applications Tracefiles<br>*Casas M., Badia R., Labarta J.* |
| **Excursion** | **16:15**<br>Departure to le Mont Saint-Michel<br>Excursion and banquet (Restaurant “Le Relais Saint-Michel”)<br>**23:00**<br>Back to Rennes |

## Friday, 31 Aug. 2007 – Technical Session E

## 08:30-10:30

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| **Room I 60 -** Session 20<br>**Mobility –** Topic 14<br>Chair: Ciaran Bryce | **9:00**<br>• Performance of MCS Selection for Collaborative Hybrid-ARQ Protocol<br>*Lee H., Kim D. W., Yoon H.*<br>**9:30**<br>• New Approaches for Relay Selection in IEEE 802.16 Mobile Multi-Hop Relay Networks<br>*Shrestha D., Lee S.-H., Kim S.-C., Ko Y.-B.*<br>**10:00**<br>• On the Connectivity of Bluetooth-Based Ad Hoc Networks<br>*Crescenzi P., Nocentini C., Pietracaprina A., Pucci G., Sandri C.* |
| **Room I 50 -** Session 21<br>**Software Computing** – Topic 2<br>Chair: Wolfgang Nagel | **9:00**<br>• Decision Trees and MPI Collective Algorithm Selection Problem<br>*Pjesivac-Grbovic J., Bosilca G., Fagg G., Angskun T., Dongarra J.*<br>**9:30**<br>• Profiling of Task-Based Applications on Shared Memory Machines: Scalability and Bottlenecks<br>*Hoffmann R., Rauber T.*<br>**10:00**<br>• Search Strategies for Automatic Performance Analysis Tools<br>*Gerndt M., Kereku E.* |
| **Room I 52 -** Session 22<br>**Distributed Systems** – Topic 8<br>Chair: Achour Mostefaoui | **8:30**<br>• Distributed Computation of All Node Replacements of a Minimum Spanning Tree<br>*Flocchini P., Mesa Enriquez T., Pagli L., Prencipe G., Santoro N.*<br>**9:00**<br>• Locating a Black Hole in an Un-Oriented Ring Using Tokens: the Case of Scattered Agents<br>*Dobrey S., Santoro N., Shi W.*<br>**9:30**<br>• A Decentralized Solution for Locating Mobile Agents<br>*Flocchini P., Xie M.*<br>**10:00**<br>• On Detecting Termination in the Crash-Recovery Model<br>*Freiling F., Majuntke M., Mittal N.* |
| **Room I 51 -** Session 23<br>**Software Computing** – Topic 9<br>Chair: Emmanuel Jeannot | **8:30**<br>• Efficient Parallel Simulation of Large-Scale Neuronal Networks on Clusters of Multiprocessor Computers<br>*Plesser H., Eppler J., Morrison A., Diesmann M., Gewaltig M.-O.*<br>**9:00**<br>• MCSTL: The Multi-Core Standard Template Library<br>*Singler J., Sanders P., Putze F.*<br>**9:30**<br>• Library Support for Parallel Sorting in Scientific Computations<br>*Dachsel H., Hofmann M., Rünger G.*<br>**10:00**<br>• Domain-Specific Optimization Strategy for Skeleton Programs<br>*Emoto K., Matsuzaki K., Hu Z., Takeichi M.* |
| | **10:30 – 11:00**<br>Coffee Break |

## Friday, 31 Aug. 2007 – Technical Session F

## 11:00-12:30

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| **Room I 60 -** Session 24<br>**Theory –** Topic 3<br>Chair: Thierry Priol | **11:00**<br>• A Framework for Scheduling with Online Availability<br>*Diedrich F., Schwarz U.*<br>**11:30**<br>• Scheduling File Transfers for Data-Intensive Jobs on Heterogeneous Clusters<br>*Khanna G., Catalyurek U., Kurc T., Sadayappan P.,Saltz J.*<br>**12:00**<br>• Cooperation in Multi-Organization Scheduling<br>*Pascual F., Rzadca K., Trystram D.* |
| **Room I 51 -** Session 25<br>**Software Computing**– Topic 2<br>Chair: Wolfgang Nagel | **11:00**<br>• Experiences Understanding Performance in a Commercial Scale-Out Environment<br>*Wisniewski R., Azimi R., Desnoyers M., Michael M., Moreira J., Shiloach D., Soares L.*<br>**11:30**<br>• Detecting Application Load Imbalance on High End Massively Parallel Systems<br>*DeRose L., Horner B., Johnson D.*<br>**12:00**<br>• A First Step Towards Automatically Building Network Representations<br>*Eyraud-Dubois L., Legrand A., Quinson M., Vivien F.* |
| **Room I 52 -** Session 26<br>**Distributed Systems** – Topic 5<br>Chair: Esther Pacitti | **11:00**<br>• Parallel Nearest Neighbour Algorithms for Text Categorization<br>*Gil-Garcia R., Badia-Contelles J. M., Pons-Porrata A.*<br>**11:30**<br>• Efficient Distributed Data Condensation for Nearest Neighbor Classification<br>*Angiulli F., Folino G.*<br>**12:00**<br>• A Search Engine Accepting On-Line Updates<br>*Marin M., Bonacic C., Gil-Costa G. V., Gomez C.* |
| **Room I 50 -** Session 27<br>**Software Computing** – Topic 6<br>Chair: Christian Pérez | **11:00**<br>• Negotiation Strategies Considering Opportunity Functions for Grid Scheduling<br>*Li J., Sim K. M., Yahyapour R.*<br>**11:30**<br>• SymGrid: a Framework for Symbolic Computation on the Grid<br>*Hammond K., Al Zain A., Cooperman G., Petcu D., Trinder P.*<br>**12:00**<br>• Grid Resource Ranking Using Low-Level Performance Measurements<br>*Tsouloupas G., Dikaiakos M.* |
| | **12:30 – 14:00**<br>Lunch |

## Friday, 31 Aug. 2007 – Closing Session

## 14:00-15:30

| | Amphitheater P |
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| **14:00** | Invited Talk<br>**André Seznec** – *IRISA (France)*<br>"15 mm x 15 mm: the new frontier of parallel computing" |
| **15:00** | Closing Remarks |