

Publications

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International Journals

- [1] Emmanuel Jeannot, Keith Seymour, Asym Yarkhan, and Jack J. Dongarra. Improved Runtime and Transfer Time Prediction Mechanisms in a Network Enabled Servers Middleware. *Parallel Processing Letters*, 17(1):47–59, March 2007.
- [2] Raphaël Bolze, Franck Cappello, Eddy Caron, Michel Daydé, Frédéric Desprez, Emmanuel Jeannot, Yvon Jégou, Stéphane Lanteri, Julien Leduc, Noredine Melab, Guillaume Mornet, Raymond Namyst, Pascale Primet, Benjamin Quetier, Olivier Richard, El-Ghazali Talbi, and Iréa Touche. Grid’5000: A Large Scale And Highly Reconfigurable Experimental Grid Testbed. *International Journal of High Performance Computing Applications*, 20(4):481–494, November 2006.
- [3] E. Jeannot and F. Wagner. Scheduling messages for data redistribution: an experimental study. *International Journal of High Performance Computing Applications*, 20(4):443–454, November 2006.
- [4] J. Cohen, E. Jeannot, N. Padoy, and F. Wagner. Message Scheduling for Parallel Data Redistribution between Clusters. *IEEE Transactions on Parallel and Distributed Systems*, 17(10):1163–1175, October 2006.
- [5] V. Berten, J. Goossens, and E. Jeannot. On the Distribution of Sequential Jobs in Random Brokering For Heterogeneous Computational Grids. *IEEE Transactions on Parallel and Distributed Systems*, 17(2):113–124, 2006.
- [6] Y. Caniou and E. Jeannot. Multi-Criteria Scheduling Heuristics for GridRPC Systems. *International Journal of High Performance Computing Applications*, 20(1):61–76, spring 2006.
- [7] E. Caron, B. Del-Fabbro, F. Desprez, E. Jeannot, and J.-M. Nicod. Managing data persistence in network enabled servers. *Scientific Programming Journal*, 13(4):333–354, 2005.
- [8] C. Germain, V. Breton, P. Clarysse, Y. Gaudeau, T. Glatard, E. Jeannot, Y. Legré, C. Loomis, I. Magnin, J. Montagnat, J.-M. Moureaux, A. Osorio, X. Pennec, and R. Texier. Grid-Enabling Medical Image Analysis. *Journal of Clinical Monitoring and Computing*, 19(4–5):339–349, October 2005.
- [9] Michel Cosnard, Emmanuel Jeannot, and Tao Yang. Compact Dag Representation and its Symbolic Scheduling. *Journal of Parallel and Distributed Computing*, 64(8):921 – 935, August 2004.
- [10] E. Caron, S. Chaumette, S. Contassot-Vivier, F. Desprez, E. Fleury, C. Gomez, M. Goursat, E. Jeannot, D. Lazure, F. Lombard, J.M. Nicod, L. Philippe, M. Quinson, P. Ramet, J. Roman, F. Rubi, S. Steer, F. Suter, and G. Utard. Scilab to Scilab_{//}, the OURAGAN Project. *Parallel Computing*, 27(11), 2001.

- [11] M. Cosnard and E. Jeannot. Automatic Parallelization Techniques Based on Compact DAG Extraction and Symbolic Scheduling. *Parallel Processing Letters*, 11(1):151–168, 2001.
- [12] M. Cosnard and E. Jeannot. Compact DAG Representation and Its Dynamic Scheduling. *Journal of Parallel and Distributed Computing*, 58(3):487–514, September 1999.

Book chapters

- [13] Cécile Germain-Renaud, Vincent Breton, Patrick Clarysse, Bertrand Delhay, Yann Gaudeau, Tristan Glatard, Emmanuel Jeannot, Yannick Legré, Johan Montagnat, Jean Marie Moureaux, Angel Osorio, Xavier Pennec, Joël Schaerer, and Romain Texier. Grid analysis of radiological data. In Mario Cannataro, editor, *Handbook of Research on Computational Grid Technologies for Life Sciences, Biomedicine and Healthcare*. Information Science Reference, 2008.
- [14] Michel Cosnard, Emmanuel Jeannot, and Tao Yang. Symbolic Scheduling of Parameterized Task Graphs on Parallel Machines. In Leonidas S. Pitsoulis and Panos M. Pardalos, editors, *Nonlinear Assignment Problems: Algorithms and Applications*. Kluwer Academic Publishers, November 2000. ISBN 0-7923-6646-8.

Proceedings in french

- [15] S. Vialle, J. Gustedt, and E. Jeannot, editors. *GridUSE-2004 : Ecole thématique sur la Globalisation des Ressources Informatiques et des Données : Utilisation et Services*. Supelec, June 2004.
- [16] J. Gustedt, E. Jeannot, J.-L. Pazat, and S. Vialle, editors. *École GRID 2002*. INRIA, December 2002. École thématique sur la globalisation des ressources et des données, Aussois, France.

International conferences with proceeding and program committee

- [17] Olivier Dubuisson, Jens Gustedt, and Emmanuel Jeannot. Validating Wrekavoc: a Tool for Heterogeneity Emulation. In *Proceedings of the 18th International Heterogeneity in Computing Workshop (HCW'09)*, Rome, Italy, May 2009. IEEE. to be published.
- [18] Emmanuel Jeannot, Erik Saule, and Denis Trystram. Bi-Objective Approximation Scheme for Makespan and Reliability Optimization on Uniform Parallel Machines. In *The 14th International Euro-Par Conference on Parallel and Distributed Computing (Euro-Par 2008)*, Las Palmas de Gran Canaria, Spain, August 2008.
- [19] Louis-Claude Canon and Emmanuel Jeannot. Scheduling Strategies for the Bicriteria Optimization of the Robustness and Makespan. In *11th International Workshop on Nature Inspired Distributed Computing (NIDISC 2008)*, Miami, Florida, USA, April 2008.
- [20] Emmanuel Jeannot. Experimental Validation of Grid Algorithms: a Comparison of Methodologies. In *Fifth High-Performance Grid Computing Workshop (HPGC'08), in conjunction with IPDPS 2008*, page 8, Miami, FL, USA, April 2008. Invited article.
- [21] Louis-Claude Canon, Emmanuel Jeannot, Rizos Sakellariou, and Wei Zheng. Comparative Evaluation of the Robustness of DAG Scheduling Heuristics. In Sergei Gorlatch, Paraskevi Fragopoulou, and Thierry Priol, editors, *Integration Research in Grid Computing, CoreGRID integration workshop*, pages 63–74, Hersonissos, Crete, Greece, April 2008. Crete University Press.
- [22] L.-C. Canon and E. Jeannot. A Comparison of Robustness Metrics for Scheduling DAGs on Heterogeneous Systems. In *Sixth International Workshop on Algorithms, Models and Tools for Parallel Computing on Heterogeneous Networks (HeteroPar'07), in conjunction with The 2007 IEEE*

- International Conference on Cluster Computing (cluster 2007)*, pages 568–567, Austin, Texas, September 2007.
- [23] E. Jeannot and Luiz-Angelo Steffene. Fast and Efficient Total Exchange on Two Clusters. In *the 13th International Euro-Par Conference*, volume 4641 of *LNCS*, pages 848–857, Rennes, France, August 2007. Springer Verlag.
 - [24] Luiz-Angelo Steffene and E. Jeannot. Total Exchange Performance Prediction on Grid Environments: modeling and algorithmic issues. In *the CoreGRID Symposium (CoreGRID'07)*, pages 131–140, Rennes, France, August 2007.
 - [25] Jack J. Dongarra, Emmanuel Jeannot, Erik Saule, and Zhiao Shi. Bi-objective Scheduling Algorithms for Optimizing Makespan and Reliability on Heterogeneous Systems. In *19th ACM Symposium on Parallelism in Algorithms and Architectures (SPAA'07)*, San Diego, CA, USA, June 2007.
 - [26] Z. Shi, E. Jeannot, and J. J. Dongarra. Robust Task Scheduling in Non-Deterministic Heterogeneous Systems. In *Proceedings of IEEE International Conference on Cluster Computing*, Barcelona, Spain, October 2006. IEEE.
 - [27] E. Jeannot and F. Vernier. A Practical Approach of Diffusion Load Balancing Algorithm. In *12th International Euro-Par Conference*, volume 4128 of *LNCS*, pages 211–221, Dresden, Germany, August 2006. Springer Verlag.
 - [28] V. Bertin, J. Goossens, and E. Jeannot. A Probabilistic Approach for Fault Tolerant Multiprocessor Real-time Scheduling. In *14th Workshop on Parallel and Distributed Real-Time Systems*, Island of Rhodes, Greece, April 2006.
 - [29] L.-C. Canon and E. Jeannot. Wrekavoc a Tool for Emulating Heterogeneity. In *15th IEEE Heterogeneous Computing Workshop (HCW'06)*, Island of Rhodes, Greece, April 2006.
 - [30] E. Jeannot and F. Wagner. Modeling, Predicting and Optimizing Redistribution between Clusters on Low Latency Networks. In *The First International Symposium on Frontiers in Networking with Applications (FINA 2006)*, Vienna, Austria, April 2006. IEEE.
 - [31] E. Jeannot and F. Wagner. Messages Scheduling for Data Redistribution between Heterogeneous Clusters. In *IASTED International Conference on Parallel and Distributed Computing and Systems (PDCS 2005)*, Phoenix, AZ, USA, November 2005.
 - [32] Franck Cappello, Eddy Caron, Michel Dayde, Frédéric Desprez, Yvon Jegou, Pascale Primet, Emmanuel Jeannot, Stephane Lanteri, Julien Leduc, Nouredine Melab, Guillaume Mornet, Raymond Namyst, Benjamin Quetier, and Olivier Richard. Grid'5000: a large scale, reconfigurable, controllable and monitorable Grid platform. In *6th IEEE/ACM International Workshop on Grid Computing (GRID 2005)*, pages 99–106, Seattle, WA, USA, November 2005.
 - [33] E. Jeannot. Improving Middleware Performance with AdOC: an Adaptive Online Compression Library for Data Transfer. In *International Parallel and Distributed Processing Symposium 2005 (IPDPS'05)*, Denver, Colorado, USA, April 2005.
 - [34] E. Jeannot and G. Monard. Computing Molecular Potential Energy Surface with DIET. In *International Conference on Information Technology (ITCC2005)*, pages 286 – 291, Las-Vegas, Nevada, USA, April 2005.
 - [35] C. Germain, V. Breton, P. Clarysse, Y. Gaudeau, T. Glatard, E. Jeannot, Y. Legr, C. Loomis, J. Montagnat, J.-M. Moureaux, A. Osorio, X. Pennec, and R. Texier. Grid-Enabling Medical Image

Analysis. In *Third International Workshop on Biomedical Computations on the Grid (Bio-Grid 2005)*, Cardiff, UK, May 2005.

- [36] Y. Caniou and E. Jeannot. Experimental Study of Multi-Criteria Scheduling Heuristics for GridRPC Systems. In *ACM-IFIP Euro-Par*, Pisa, Italy, September 2004.
- [37] F. Desprez and E. Jeannot. Improving the GridRPC Model with Data Persistence and Redistribution. In *3rd International Symposium on Parallel and Distributed Computing (ISPDC)*, Cork, Ireland, July 2004.
- [38] Y. Caniou and E. Jeannot. Efficient Scheduling Heuristics for GridRPC Systems. In *QOS and Dynamic System workshop of IEEE ICPADS (International Conference on Parallel and Distributed Systems) conference*, pages 621 – 630, New-Port Beach, California, July 2004.
- [39] E. Jeannot and F. Wagner. Two Fast and Efficient Message Scheduling Algorithms for Data Redistribution through a Backbone. In *IEEE International Conference on Parallel and Distributed Processing Symposium (IPDPS)*, Santa-Fe, New-Mexico, USA, April 2004.
- [40] Johanne Cohen, Emmanuel Jeannot, and Nicolas Padoy. Messages Scheduling for Data Redistribution between Clusters. In *Algorithms, models and tools for parallel computing on heterogeneous networks (HeteroPar'03) workshop of SIAM PPAM 2003, LNCS 3019*, pages 896–906, Czestochowa, Poland, September 2003.
- [41] Y. Caniou and E. Jeannot. New Scheduling Heuristics in the Client-Agent-Server Model. In *IEEE Heterogeneous Computing Workshop (HCW'03)*, Nice, France, April 2003.
- [42] E. Jeannot, B. Knutsson, and M Björkman. Adaptive Online Data Compression. In *IEEE High Performance Distributed Computing (HPDC'11)*, pages 379 – 388, Edinburgh, Scotland, July 2002.
- [43] B. Cirou and E. Jeannot. Triplet: a Clustering Scheduling Algorithm for Heterogeneous Systems. In *IEEE ICPP International Workshop on Metacomputing Systems and Applications (MSA'2001)*, Valencia, Spain, September 2001.
- [44] E. Jeannot. Automatic multithreaded parallel program generation for message passing multiprocessors using parameterized task graphs. In *International Conference 'Parallel Computing 2001' (ParCo2001)*, Naples, Italy, September 2001.
- [45] M. Cosnard, E. Jeannot, and T. Yang. SLC: Symbolic Scheduling for Executing Parameterized Task Graphs on Multiprocessors. In *International Conference on Parallel Processing (ICPP'99)*, Aizu Wakamatsu, Japan, September 1999.
- [46] M. Cosnard, E. Jeannot, and T. Yang. Symbolic Partitionning and Scheduling of Parameterized Task Graphs. In *IEEE International Conference on Parallel and Distributed Systems (ICPADS'98)*, Tainan, Taiwan, December 1998.
- [47] M. Cosnard, E. Jeannot, and L. Rougeot. Low Memory Cost Dynamic Scheduling of Large Coarse Grain Task Graphs. In *IEEE International Parallel Processing Symposium (IPPS'98)*, Orlando, Florida, April 1998. IEEE.
- [48] M. Cosnard and E. Jeannot. Automatic Coarse-Grained Parallelization Techniques. In Grandinetti and Kowalik, editor, *NATO workshop: Advances in High Performance Computing*. Kluwer academic Publishers, 1997.

International conference without proceeding, with program committee

- [49] Jack Dongarra, Emmanuel Jeannot, and Julien Langou. Modeling the LU Factorization for SMP Clusters. In *4th International Workshop on Parallel Matrix Algorithms and Applications (PMAA'06)*, Rennes, France, September 2006.
- [50] F. Desprez, E. Fleury, E. Jeannot, F. Suter, and J-M. Nicod. Computational servers in a metacomputing environment. In *SIAM International Workshop on Parallel Matrix Algorithms and Applications*, Neuchâtel, Switzerland, August 2000.

Other conferences with proceeding and program committee

- [51] Louis-Claude Canon and Emmanuel Jeannot. Precise Evaluation of the Efficiency and the Robustness of Stochastic DAG Schedules. In *Dixime conférence de la Société Française de Recherche Opérationnelle et d'Aide à la Décision (ROADEF 09)*, page 12, Nancy, France, February 2009. to be published.
- [52] Phillipe D'Anfray and Emmanuel Jeannot. GRID'5000 une plate-forme d'expérimentation pour les systèmes distribués à large échelle. In *Journées Réseaux - JRES 2007*, page 6 pages, Strasbourg France, 2007.
- [53] Y. Caniou and E. Jeannot. Le HTM : un module de prédiction de performance non-intrusif pour l'ordonnancement de tâches sur plate-forme de meta-computing. In *16^{ème} Rencontres Francophones du Parallélisme (RENPAR 2005)*, Le Croisic, France, April 2005.
- [54] Y. Caniou and E. Jeannot. Ordonnancement pour la grille : une extension de MCT. In *14^{ème} Rencontres Francophones du Parallélisme (RENPAR 2002)*, Hammamet, Tunisie, April 2002.

International workshops without selection committee

- [55] M. Cosnard and E. Jeannot. On the Efficiency of Dynamic Scheduling for Automatic Parallelization. In *Workshop: Scheduling in Computer and Manufacturing Systems*, Dagstuhl, Germany, June 1997.
- [56] M. Cosnard and E. Jeannot. Building and Scheduling Coarse Grain Task Graphs. In *Workshop on Scheduling in Parallel and Distributed Systems (WSPDS'96)*, CIRM, Marseille, France, June 1996.

French speaking workshops without selection committee

- [57] Y. Caniou and E. Jeannot. Limitation des études validées par Simulation. In *Ecole thématique sur la Globalisation des Ressources Informatique et des Données : Utilisation et Services (GridUSE-2004)*, Metz, France, June 2004.
- [58] E. Jeannot and F. Wagner. Message Scheduling for Data Redistribution through High Performance Network. In *École DRUIDE 2004 (DistRibUtIon de Donnée à grande Echelles)*, Le Croisic, France, May 2004.
- [59] Jeannot E. Compression adaptative et dynamique de données. In *Ecole thématique GRID 2002*, pages 55 – 63, Aussois, France, December 2002. INRIA.
- [60] M. Cosnard and E. Jeannot. Automatic parallelization of coarse grained programs. In *Journées de l'informatique Messine (JIM'99)*, Ile de saulcy, Metz, France, May 1999.
- [61] M. Cosnard and E. Jeannot. Ordonnancement de graphes de tâches paramétrés. In *Conception et mise en œuvre d'applications parallèles irrégulières de grande taille (ICaRE'97)*, Aussois, France, December 1997.

- [62] M. Cosnard, E. Jeannot, and M. Loi. PlusPyr un outil d'aide à la parallélisation. In G. Bernard, J. Chassin de Kergommeaux, B. Folliot, and C. Roucairol, editors, *Placement dynamique et répartition de charge : application aux systèmes répartis et parallèles*, Collection didactique INRIA, dec. 1996, pages 131 – 150, Presqu'île de Giens, France, July 1996.

Research reports not published elsewhere

- [63] Emmanuel Jeannot. On the Time Complexity of the Sort Problem. Research Report RR-6635, INRIA, September 2008.
- [64] Martin Do, Jack Dongarra, Emmanuel Jeannot, and Phillip J Mucci. A Test Suite for PVM. Research Report ut-cs-95-277, Department of Computer Science, University of Tennessee, Knoxville, 1995.

Other research reports

- [65] Olivier Dubuisson, Jens Gustedt, and Emmanuel Jeannot. Multi-Site Emulation using Wrekavoc: Validating Distributed Algorithms and Applications. Research Report RR-6696, INRIA, October 2008.
- [66] Louis-Claude Canon and Emmanuel Jeannot. Evaluation and Optimization of the Robustness of DAG Schedules in Heterogeneous Environments. Research Report 6476, INRIA, March 2008.
- [67] Louis-Claude Canon, Emmanuel Jeannot, Rizos Sakellariou, and Wei Zheng. Comparative Evaluation of the Robustness of DAG Scheduling Heuristics. Technical Report TR-0120, CoreGRID Institute on Resource Management and Scheduling, December 2007.
- [68] Emmanuel Jeannot and Flavien Vernier. A Practical Approach of Diffusion Load Balancing Algorithms. Research Report 5875, INRIA, March 2006.
- [69] Eddy Caron, Bruno DelFabbro, Frédéric Desprez, Emmanuel Jeannot, and Jean-Marc Nicod. Managing Data Persistence in Network Enabled Servers. Research Report RR-5725, INRIA, October 2005.
- [70] E. Jeannot. Improving Middleware Performance with AdOC: an Adaptive Online Compression Library for Data Transfer. Research Report RR-5500, INRIA, February 2005.
- [71] V. Bertin, J. Goossens, and E. Jeannot. On the Distribution of Sequential Jobs in Random Brokering For Heterogeneous Computational Grids. Research Report RR-5499, INRIA, February 2005.
- [72] E. Jeannot and F. Wagner. Modelizing, Predicting and Optimizing Redistribution between Clusters on Low Latency Networks. Research Report 5361, INRIA, LORIA, November 2004.
- [73] Y. Caniou and E. Jeannot. Improvements and Study of the Accuracy of the Tasks Duration Predictor, New Heuristics. Research Report RR-5206, INRIA, May 2004.
- [74] Y. Caniou and E. Jeannot. Study of the behaviour of heuristics relying on the Historical Trace Manager in a (multi)client-agent-server system. Research Report RR-5168, INRIA, April 2004.
- [75] E. Jeannot and F. Wagner. Message Scheduling for Data Redistribution through High Performance Networks. Research Report 5077, INRIA, LORIA, January 2004.
- [76] Johanne Cohen, Emmanuel Jeannot, and Nicolas Padoy. Parallel Data Redistribution Over a Backbone. Research Report RR-4725, INRIA, February 2003.
- [77] Y. Caniou and E. Jeannot. Scheduling on the GRID : Historical Trace and Dynamic Heuristics. Research Report RR-4620, INRIA, November 2002.

- [78] E. Jeannot. Adaptive online data compression. Research Report RR-4400, INRIA, France, March 2002.
- [79] F. Desprez and E. Jeannot. Adding Data Persistence and Redistribution to NetSolve. Research Report RR2001-39, Laboratoire de l'Informatique du Parallélisme, Ecole Normale Supérieure de Lyon, France, 2001.
- [80] B. Cirou and E. Jeannot. Tripet: a Clustering Scheduling Algorithm for Heterogeneous Systems. Technical Report RT-0248, INRIA, France, 2001.
- [81] E. Jeannot. Automatic code generation in the task graph model. Technical Report RR-1230-00, LaBRI, Université de Bordeaux I, France, 2000.
- [82] M. Cosnard, E. Jeannot, and T. Yang. Symbolic Partitionning and Scheduling of Parameterized Task Graphs. Research Report RR1998-41, Laboratoire de l'Informatique du Parallélisme, Ecole Normale Supérieure de Lyon, France, September 1998. (www.ens-lyon.fr/LIP/publis.us.html).
- [83] M. Cosnard, E. Jeannot, and L. Rougeot. Low Memory Cost Dynamic Scheduling of Large Coarse Grain Task Graphs. Research Report RR98-14, Laboratoire de l'Informatique du Parallélisme, Ecole Normale Supérieure de Lyon, France, March 1998.
- [84] M. Cosnard and E. Jeannot. Building and Scheduling Coarse Grain Task Graphs. Research Report RR97-03, Laboratoire de l'Informatique du Parallélisme, Ecole Normale Supérieure de Lyon, France, Ecole Normale Supérieure de Lyon, France, February 1997.