

# Paul Feautrier's (In)Complete Works

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## References

- [1] Paul Feautrier. The power of polynomials. In *IMPACT*, 2015. `powerPol-v2.pdf`.
- [2] Paul Feautrier. Reminiscences about Array Expansion, or there and back again. In *ACM Int. Conf. on Supercomputing 25th Anniversary Volume*, 2014. `ics2505-feautrier.pdf`.
- [3] P. Feautrier, E. Violard, and A. Ketterlin. Improving x10 program performance by clock removal. In *Compiler Construction Conference, CC'2014*, LNCS 8409, April 2014. `CC2014-unclock.pdf`.
- [4] Albert Cohen, Alain Darte, and Paul Feautrier. Static analysis of open-stream programs. Technical Report RR-8764, LIP, ENS-Lyon, France, October 2013. Livrable ManycoreLabs 2.5.3, dpos en tant que rapport de recherche en aot 2015. `staticOpenStream.pdf`.
- [5] C. Alias, P. Feautrier, A. Darte, and L. Gonnord. Rank: A tool to check program termination and computational complexity. In *Proc. CSTVA*, March 2013. `cstva.pdf`.
- [6] Tomofumi Yuki, Paul Feautrier, Sanjay V. Rajopadhye, and Vijay Saraswat. Array dataflow analysis for polyhedral x10 programs. In *PPOPP*, pages 23–34, 2013. `PPOPP13-x10.pdf`.
- [7] Paul Feautrier, Abdoulaye Gamatié, and Laure Gonnord. Enhancing the compilation of synchronous dataflow programs with a combined numerical-boolean abstraction. *CSI Journal of Computing*, 1(4):8:86 – 8:99, 2012. `CSIJournal13-synchrone.pdf`.

- [8] Paul Feautrier and Christian Lengauer. The polyhedron model. In David Padua, editor, *Encyclopedia of Parallel Programming*. Springer, 2011. [FeautrierLengauerPolyhedronModel.pdf](#).
- [9] Paul Feautrier. Bernstein’s conditions. In David Padua, editor, *Encyclopedia of Parallel Programming*. Springer, 2011. [bernstein.pdf](#).
- [10] Paul Feautrier. Dependences. In David Padua, editor, *Encyclopedia of Parallel Programming*. Springer, 2011. [dependences.pdf](#).
- [11] Paul Feautrier. Array layout for parallel processing. In David Padua, editor, *Encyclopedia of Parallel Programming*. Springer, 2011. [layout.pdf](#).
- [12] Paul Feautrier. Simplification of boolean affine formulas. Technical Report HAL RR-7689, INRIA, 2011. [RR-7689.pdf](#).
- [13] Christophe Alias, Alain Darte, Paul Feautrier, and Laure Gonnord. Multi-dimensional rankings, program termination and complexity bounds of flowchart programs. In *Static Analysis Symposium, SAS 2010*, pages 117–133, Perpignan, September 2010. LNCS 6337, [ranking-final.pdf](#).
- [14] Paul Feautrier and Laure Gonnord. Accelerated invariant generation for C programs with aspic and c2fsm. *Electronic Notes in Theoretical Computer Science*, 2010. [aspic\\_c2fsm\\_tapas2010.pdf](#).
- [15] O. Labbani, P. Feautrier, E. Lenormand, and M. Barreteau. Elementary transformation analysis for Array-OL. In *ACS/IEEE International Conference on Computer Systems and Applications, AICCSA’09*, pages 362–367, Rabat, Morocco, May 2009. [SpearSyntol.pdf](#).
- [16] Philippe Grosse, Yves Durand, and Paul Feautrier. Methods for power optimization in soc-based data flow systems. *ACM Trans. Des. Autom. Electron. Syst.*, 14(3):1–20, 2009. [socpoweroptim1-11.pdf](#).
- [17] Hadda Cherroun, Alain Darte, and Paul Feautrier. Reservation table scheduling: Branch-and-bound based optimization vs. integer linear programming techniques. *RAIRO-OR*, 41(4):427–454, December 2007. [ro0740.pdf](#).
- [18] Hadda Cherroun and Paul Feautrier. An exact resource constrained-scheduler using graph coloring technique. In *AICCSA’07: The 5th ACS/IEEE International Conference on Computer Systems and Applications*, pages 554–561. IEEE Computer Society, May 2007. Best paper award, [bollobas.pdf](#).

- [19] Nicolas Fournel, Antoine Fraboulet, and Paul Feautrier. eSimu : a fast and accurate energy consumption simulator for embedded system. In *IEEE International Workshop: From Theory to Practice in Wireless Sensor Networks*, Helsinki, Finland, jun 2007. [spots07.pdf](#).
- [20] Nicolas Fournel, Antoine Fraboulet, and Paul Feautrier. Fast and instruction accurate embedded systems energy characterization using non-intrusive measurements. In *PATMOS Workshop - International Workshop on Power And Timing Modeling, Optimization and Simulation*, Göteborg, Sweden, sept 2007. [dac07\\_fournel.pdf](#).
- [21] Paul Feautrier. Compilateurs. In Jacky Akoka and Isabelle Comyn-Wattiau, editors, *Encyclopdie de l'Informatique*. Vuibert, 2006. [vuibert-compil.pdf](#).
- [22] Hadda Cherroun, Alain Darte, and Paul Feautrier. Scheduling under resource constraints using dis-equalities. In *Design Automation and Test Europe'06*, March 2006. [paperDate.pdf](#).
- [23] P. Amiranoff, A. Cohen, and P. Feautrier. Beyond iteration vectors: Instancewise relational abstract domains. In *Static Analysis Symposium (SAS'06)*, Seoul, Corea, August 2006. [amiranoff.pdf](#).
- [24] Paul Feautrier. Scalable and structured scheduling. *Int. J. of Parallel Programming*, 34(5):459–487, May 2006. [samos.pdf](#).
- [25] Philippe Grosse, Yves Durand, and Paul Feautrier. Power modelling of a noc based design for high-speed telecommunication systems. In *PATMOS*, September 2006. [Patmos\\_2006.pdf](#).
- [26] P. Feautrier. Parallélisation automatique, histoire et perspectives. In D. Trystram, Y. Slimani, and M. Jemni, editors, *Informatique répartie*, Hors serie TSI, chapter 6, pages 161–182. Hermes, 2005. [renpar.pdf](#).
- [27] Cédric Bastoul and Paul Feautrier. Adjusting a transformation for legality. *Parallel Processing Letters*, 15(1–2):3–17, 2005. [pp105.pdf](#).
- [28] Paul Feautrier. Scalable and Modular Scheduling. In Andy D. Pimentel and Stamatis Vassiliadis, editors, *Computer Systems: Architectures, Modeling and Simulation*, pages 433–442. Springer LNCS 3133, 2004. [lncs-samos.pdf](#).
- [29] Cédric Bastoul and Paul Feautrier. More legal transformations for locality. In *Europar'10*, pages 272–283. Springer, LNCS 3149, 2004. [morelegal.pdf](#).

- [30] Pierre Amiranoff, Albert Cohen, and Paul Feautrier. Instance-wise array dependence test for recursive programs. In *Proc. of the 10th Workshop on Compilers for Parallel Computers*, University of Leiden. Amsterdam, NL, January 2003. [instancewise.pdf](#).
- [31] C. Bastoul and P. Feautrier. Improving data locality by chunking. In *CC'12 International Conference on Compiler Construction, LNCS 2622*, pages 320–335, April 2003. [chunking.pdf](#).
- [32] C. Bastoul and P. Feautrier. Reordering methods for data locality improvement. In *CPC'10 Compilers for Parallel Computers*, pages 187–196, January 2003. [reordering.pdf](#).
- [33] Zbigniew Chamski, Marc Duranton, Albert Cohen, Christine Eisenbeis, Paul Feautrier, and Daniela Genius. Application domain-driven system design for pervasive video processing. In Twan Basten, Marc Geilen, and Harmke de Groot, editors, *Ambient Intelligence: Impact on Embedded System Design*. Kluwer, 2003. [CDCEFG03.pdf](#).
- [34] Martin Griebel, Paul Feautrier, and Armin Groesslinger. Forward communication only placements and their use for parallel program construction. In Bill Pugh and Chau-Wen Tseng, editors, *LCPC'02*, pages 16–30. Springer, LNCS 2481, July 2002. [GriFeaGroe02.pdf](#).
- [35] Denis Barthou, Paul Feautrier, and Xavier Redon. On the equivalence of two systems of affine recurrence equations). In *Proceedings of the 8th International Euro-Par Conference on Parallel Processing, Euro-Par '02*, pages 309–313. Springer-Verlag, 2002. [RR-4285.pdf](#).
- [36] Peng Wu, Paul Feautrier, David Padua, and Zehra Sura. Instance-wise points-to analysis for loop-based dependence testing. In *International Conference on Supercomputing (ICS 2002)*, pages 262 – 273, June 2002. [pointsTo.pdf](#).
- [37] Albert Cohen, Daniela Genius, Abdesslem Kortebi, Zbigniew Chamski, Marc Duranton, and Paul Feautrier. Multiperiodic process networks: Prototyping and verifying stream-processing systems. In *EuroPar'02*, pages 137–146. Springer, 2002. [multiperiodic.pdf](#).
- [38] Paul Feautrier. Array dataflow analysis. In Pande S. and Agrawal D., editors, *Compiler Optimizations for Scalable Parallel Systems*, LNCS 1808, chapter 6, pages 173–216. Springer, 2001. [lncs-ada.ps](#).

- [39] Martin Griebl, Paul Feautrier, and Christian Lengauer. Index set splitting. *Int. J. of Parallel Programming*, 28(6):607–631, 2000. [indexSetSplitting.pdf](#).
- [40] Xavier Redon and Paul Feautrier. Detection of scans in the polytope model. *Parallel Algorithms and Applications*, 15:229–263, 2000. [detector.pdf](#).
- [41] Paul Feautrier. Les compilateurs. *Technique et science informatiques*, 19(1–3):223–232, 2000. [compil.pdf](#).
- [42] Paul Feautrier. Automatic distribution of data and computations. Technical Report 2000/3, PRiSM, 2000. [autodistri.pdf](#).
- [43] Martin Griebl, Paul Feautrier, and Christian Lengauer. On index set splitting. In *PACT’99*, 1999. [pact-1999.pdf](#).
- [44] Vincent Lefebvre and Paul Feautrier. Automatic storage management for parallel programs. *Parallel Computing*, 24(3):649–671, 1998. [storage.pdf](#).
- [45] Pierre Boulet and Paul Feautrier. Scanning polyhedra without DO loops. In *PACT’98*, October 1998. [without.pdf](#).
- [46] Paul Feautrier. A parallelization framework for recursive tree programs. In *Europar’98*, number 1470 in LNCS, pages 470–479. Springer, September 1998. [tree.pdf](#).
- [47] Denis Barthou, Jean-François Collard, and Paul Feautrier. Fuzzy array dataflow analysis. *JPDC*, 40:210–226, 1997. [fada.pdf](#).
- [48] Paul Feautrier and Guy-René Perrin. Les langages de programmation parallèle et leurs compilateurs. In Michel Cosnard, editor, *ARAGO 19*, chapter 16. OFTA, April 1997. [arago.pdf](#).
- [49] Paul Feautrier. Basis of parallel speculative execution. In *Europar’97*, pages 3–14. Springer-Verlag, LNCS 1300, 1997. [speculative.pdf](#).
- [50] Vincent Lefebvre and Paul Feautrier. Optimizing storage size for static control programs in automatic parallelizers. In Christian Lengauer, Martin Griebl, and Sergei Gorlatch, editors, *Europar’97*, volume 1300 of *LNCS*, pages 356–363. Springer, August 1997. [optimizingStorage.pdf](#).

- [51] Vincent Lefebvre and Paul Feautrier. Storage management in parallel programs. In IEEE Computer Society, editor, *5th Euromicro Workshop on Parallel and Distributed Processing*, pages 181–188, Londres (England), January 1997. `storageManagement.pdf`.
- [52] Paul Feautrier. Distribution automatique des données et des calculs. *T.S.I.*, 15(5):529–557, 1996. `mons-tsi.pdf`.
- [53] Michel Barreteau and Paul Feautrier. Efficient mapping of interdependent scans. In Bougé Fraigniaud Mignotte Robert, editor, *European Conference on Parallel Processing Euro-Par’96*, pages 463–466, Lyon, France, August 1996. Springer-Verlag LNCS 1123. `interScans.pdf`.
- [54] Jean-François Collard Denis Barthou and Paul Feautrier. Applications of fuzzy array dataflow analysis. In Bougé Fraigniaud Mignotte Robert, editor, *European Conference on Parallel Processing Euro-Par’96*, pages 424–427, Lyon, France, August 1996. Springer-Verlag LNCS 1123. `appFADA.pdf`.
- [55] Paul Feautrier. Automatic parallelization in the polytope model. In Guy-René Perrin and Alain Darte, editors, *The Data-Parallel Programming Model*, volume LNCS 1132, pages 79–103. Springer, 1996. `autopar.pdf`.
- [56] J.-F. Collard, P. Feautrier, and T. Risset. Construction of DO loops from systems of affine constraints. *Parallel Processing Letters*, 5:421–436, 1995.
- [57] Paul Feautrier. Compiling for massively parallel architectures: a perspective. *Microprogramming and Microprocessors*, 41:425–439, 1995. `perspective.pdf`.
- [58] Paul Feautrier. Toward automatic distribution. *Parallel Processing Letters*, 4(3):233–244, 1994. `toward.pdf`.
- [59] Paul Feautrier. Fine-grain scheduling under resource constraints. In *7th Workshop on Language and Compilers for Parallel Computing*, pages 1–15. Springer-Verlag, LNCS 892, August 1994. `soft1.pdf`.
- [60] Paul Feautrier. Some efficient solutions to the affine scheduling problem, I, one dimensional time. *Int. J. of Parallel Programming*, 21(5):313–348, October 1992. `bdt10.pdf`.

- [61] Paul Feautrier. Some efficient solutions to the affine scheduling problem, II, multidimensional time. *Int. J. of Parallel Programming*, 21(6):389–420, December 1992. [bdt20.pdf](#).
- [62] Nadia Tawbi and Paul Feautrier. Processor allocation and loop scheduling on multiprocessor computers. In *Proceedings of the 6th international conference on Supercomputing*, ICS '92, pages 63–71, New York, NY, USA, 1992. ACM. [p63-tawbi.pdf](#).
- [63] Paul Feautrier. Dataflow analysis of scalar and array references. *Int. J. of Parallel Programming*, 20(1):23–53, February 1991. [dataflow.pdf](#).
- [64] Paul Feautrier, Jean-François Collard, and Cédric Bastoul. The pip user manual, 1990. [piplib.pdf](#).
- [65] Pierre Jouvelot and Paul Feautrier. Parallélisation Sémantique. *Informatique théorique et Applications*, 24:131–159, 1990.
- [66] Paul Feautrier. Asymptotically efficient algorithms for parallel architectures. In M. Cosnard and C. Girault, editors, *Decentralized System*, pages 273–284. IFIP WG 10.3, North-Holland, December 1989. [mimdalg.pdf](#).
- [67] Paul Feautrier. Semantical analysis and mathematical programming; application to parallelization and vectorization. In M. Cosnard, Y. Robert, P. Quinton, and M. Raynal, editors, *Workshop on Parallel and Distributed Algorithms, Bonas*, pages 309–320. North Holland, 1989. [semap.pdf](#).
- [68] Paul Feautrier. Parametric integer programming. *RAIRO Recherche Opérationnelle*, 22:243–268, September 1988.
- [69] Paul Feautrier. Array expansion. In *ACM Int. Conf. on Supercomputing*, pages 429–441, 1988. [arrayExpansion.pdf](#).
- [70] Lucien Censier and Paul Feautrier. A new solution to coherence problems in multicache systems. *IEEE Trans. on Computers*, C-27:1112–1118, December 1978. [coherence.pdf](#).
- [71] Paul Feautrier. Post grammars as a programming language description tool. *RAIRO, R1*, pages 43–72, 1975. [post.pdf](#).
- [72] Paul Feautrier. Construction of non LTE equilibrium atmospheres. In O. Gingerich, editor, *Proc. of the third Harvard-Smithsonian Stellar Atmosphere conf.* MIT press, 1969.

- [73] Nicole Feautrier, Paul Feautrier, and Vo Ky Lan. Sur la résolution numérique de certains systèmes d'équations intégral-différentielles de la mécanique quantique. *Cr. Acad. Sci.*, 268:1, 1968. [cras-68.pdf](#).
- [74] Paul Feautrier. Etude de l'influence des écarts à l'équilibre thermodynamique local sur le continu. *Annales d'Astrophysique*, 31:257, 1968. [1968AnAp\\_\\_31\\_\\_257F.pdf](#).
- [75] Paul Feautrier. Etude du comportement à l'infini de l'intensité spécifique dans une atmosphère plane parallèle. *Annales d'Astrophysique*, 30:125, 1967. [1967AnAp\\_\\_30\\_\\_347F.pdf](#).
- [76] Paul Feautrier. Construction de modèles en équilibre thermodynamique local. *Annales d'Astrophysique*, 30:125, 1967. [1967AnAp\\_\\_30\\_\\_125F.pdf](#).
- [77] Paul Feautrier and Michel Schneider. Etude du profil instrumental d'un spectrographe. *Cr. Acad. Sci.*, 258:774, 1967.
- [78] Paul Feautrier. A procedure for evaluating the mean intensity and the flux. In *Proc. of the first Harvard-Smithsonian Conf. on Stellar Atmospheres*, 1964.
- [79] Paul Feautrier. A method for improving the  $t(x)$  law. In *Proc. of the first Harvard-Smithsonian Conf. on Stellar Atmospheres*, 1964.
- [80] Paul Feautrier. Sur la résolution numérique de l'équation de transfert. *Cr. Acad. Sci.*, 258:3189, 1964. [cras-64.pdf](#).
- [81] Paul Feautrier. Solutions à flux constant de l'équation de transfert. *J. of Quantitative Spectroscopy and Radiative Transfer*, 3:103, 1963.
- [82] Paul Feautrier. La détermination des températures de surface des modèles d'atmosphère. *Cr Acad Sci*, 254:824, 1962.
- [83] Paul Feautrier. Construction d'atmosphères-modèles. cas non gris. *Cr. Acad. Sci.*, 253:1315, 1961.