Complete publications list for Pierre McKenzie

February 2012

Refereed journal publications

To appear:

[1] S. Cook, P. McKenzie, D. Wehr, M. Braverman and R. Santhanam, Pebbles and branching programs for tree evaluation, *ACM Transactions on Computation Theory*, 43 pages.

Appeared:

[2] P. McKenzie, M. Thomas and H. Vollmer, Extensional uniformity for Boolean circuits, *SIAM J. on Computing*, 39, no. 7 (2010), pp. 3186-3206.

[3] L. Longpré and P. McKenzie, The complexity of Solitaire, *Theoretical Computer Science* 40, no. 50 (2009) (MFCS 2007 Special issue), pp. 5252-5260.

[4] H. Mercier, P. McKenzie and S. Wolf, Worst-case nonzero-error interactive communication, *IEEE Transactions on Information Theory* 54(7) (2008) pp. 2857-2867.

[5] A. Gál, M. Koucký and P. McKenzie, Incremental branching programs, *Theory of Computing Systems* 43 (2008) (CSR 2006 Special issue), pp. 159-184.

[6] P. McKenzie and K. Wagner, The complexity of membership problems for circuits over sets of natural numbers, *Computational Complexity* 16(3) (2007) pp. 211-244.

[7] P. McKenzie, T. Schwentick, D. Thérien and H. Vollmer, The many faces of a translation, *J. Computer and System Sciences* **72**, 1 (2006), pp. 163-179.

[8] A. Finkel, P. McKenzie and C. Picaronny, A well-structured framework for analyzing Petri net extensions, *Information and Computation* **195,** 1-2 (2004), pp. 1-29.

[9] P. McKenzie, H. Vollmer and K. Wagner, Arithmetic circuits and polynomial replacement systems, *SIAM J. on Computing* **33**, 6 (2004), pp. 1513-1531.

[10] B. Jenner, J. Köbler, P. McKenzie and J. Torán, Completeness results for graph isomorphism, *J. Computer and System Sciences* **66**, 3 (2003), pp. 549-566. [Corrigendum, *J. Computer and System Sciences* 72(4) (2006) p. 783.]

[11] M. Holzer and P. McKenzie, Alternating and empty alternating auxiliary stack automata, *Theoretical Computer Science* **299**, 1-3, (2003), pp. 307-326.

[12] C. Damm, M. Holzer and P. McKenzie, The complexity of tensor calculus, *Computational Complexity* **11**, 1/2 (2002), pp. 54–89.

[13] D. Mix Barrington, P. Kadau, K.-J. Lange and P. McKenzie, On the complexity of some problems on groups input as multiplication tables, *J. Computer and System Sciences* **63**, 2 (2001), pp. 186-200.

[14] C. Lautemann, P. McKenzie, T. Schwentick and H. Vollmer, The descriptive complexity approach to *LOGCFL*, *J. Computer and System Sciences* **62**, 4 (2001), pp. 629-652.

[15] K.-J. Lange, P. McKenzie and A. Tapp, Reversible space equals deterministic space, *J. Computer and System Sciences* **60**, 2 (2000), pp. 354-367.

[16] R. Raz and P. McKenzie, Separation of the monotone NC hierarchy, *Combinatorica* **19**, 3 (1999), pp. 403-435.

[17] H. Caussinus, P. McKenzie, D. Thérien and H. Vollmer, Nondeterministic NC^1 computation, *J. Computer and System Sciences* **57**, 2 (1998), pp. 200-212.

[18] M. Beaudry, P. McKenzie, P. Péladeau and D. Thérien, Finite monoids: from word to circuit evaluation, *SIAM J. on Computing* **26**, 1 (1997), pp. 138-152.

[19] A. Finkel and P. McKenzie, Verifying identical communicating processes is undecidable, *Theoretical Computer Science* **174** (1997), pp. 217-230.

[20] B. Jenner, P. McKenzie and D. Thérien, Logspace and logtime leaf languages, *Information and Computation* **129,** 1 (1996), pp. 21-33.

[21] M. Beaudry and P. McKenzie, Circuits, matrices and nonassociative computation, *J. Computer and System Sciences* **50**, 3 (1995), pp. 441-455.

[22] F. Bédard, F. Lemieux and P. McKenzie, Extensions to Barrington's M-program model, *Theoretical Computer Science A* **107**, 1 (1993), pp. 31-62.

[23] M. Beaudry, P. McKenzie and D. Thérien, The membership problem in aperiodic transformation monoids, *J. of the Association for Computing Machinery* **39**, 2 (1992), pp. 599-616.

[24] P. McKenzie, P. Péladeau and D. Thérien, NC^1: The automata-theoretic viewpoint, *Computational Complexity* **1** (1991), pp. 330-359.

[25] D.A. Mix Barrington and P. McKenzie, Oracle branching programs and Logspace versus P, *Information and Computation* **95** (1991), pp. 96-115.

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[27] P. McKenzie and S.A. Cook, The parallel complexity of Abelian permutation group problems, *SIAM J. on Computing* **16**, 5 (1987), pp. 880-909.

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[29] P. McKenzie, Permutations of Bounded Degree Generate Groups of Polynomial Diameter, *Information Processing Letters* **19** (1984), pp. 253-254.

Submitted:

[30] B. Borchert, P. McKenzie and K. Reinhardt, Few product gates but many zeros, *Theory of Computing*, submitted June 24th 2010, 12 pages.

[31] M. Cadilhac, A. Finkel and P. McKenzie, Affine Parikh automata, invited submission to *RAIRO - Theoretical Informatics and Applications*, November 2011, 34 pages.

[32] M. Cadilhac, A. Finkel and P. McKenzie, Bounded Parikh automata, invited submission to *International Journal of Foundations of Computer Science*, January 2012, 19 pages.

Refereed conference proceedings

To appear:

[33] M. Blondin and P. McKenzie, The complexity of intersecting finite automata having few final states, *Proc. 7th Int. Computer Science in Russia Conf.*, 2012.

Appeared:

[34] M. Cadilhac, A. Finkel and P. McKenzie, On the expressiveness of Parikh automata and related models, *Proc. 3rd Int. Workshop on Non-Classical Models of Automata and Applications* (NCMA 2011), R. Freund, M. Holzer, C. Mereghetti, F. Otto and B. Palano (eds.): books@ocg.at, Volume 282, Austrian Computer Society 2011, pp. 103-119.

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[36] M. Holzer and P. McKenzie, The computational complexity of RaceTrack, *Proc. 8th Int. Conf. on FUN with Algorithms* (FUN 2010), Springer LNCS 6099 (2010), pp. 260-271.

[37] M. Braverman, S. Cook, P. McKenzie, R. Santhanam and D. Wehr, Fractional pebbling and thrifty branching programs, *IARCS Annual Conf. on Foundations of Software Technology and Theoretical Computer Science* (FSTTCS 2009), editors R. Kannan and K. Narayan Kumar, Leibniz International Proceedings in Informatics (LIPIcs), vol. 4 (2009), pp. 109-120. With [39], precursor to [1].

[38] B. Borchert, P. McKenzie and K. Reinhardt, Few product gates but many zeros, *Proc. 27th Int. Symp. on the Mathematical Foundations of Computer Science* (MFCS 2009), Springer LNCS 5734 (2009), pp. 162-174.

[39] M. Braverman, S. Cook, P. McKenzie, R. Santhanam and D. Wehr, Branching programs for the tree evaluation problem, *Proc. 27th Int. Symp. on the Mathematical Foundations of Computer Science* (MFCS 2009), Springer LNCS 5734 (2009), pp. 175-186.

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[44] P. McKenzie and K. Wagner, The complexity of membership problems for circuits over sets of natural numbers, *Proc. 20th Symp. on Theoretical Aspects of Computer Science* (STACS 2003), Springer LNCS 2607 (2003), pp. 571-582. Precursor to [6].

[45] M. Holzer and P. McKenzie, Alternating and empty alternating auxiliary stack automata, *Proc. 25th Int. Symp. on the Mathematical Foundations of Computer Science* (MFCS 2000), Springer LNCS 1893 (2000), pp. 415-425. Precursor to [11].

[46] D. Barrington, P. McKenzie, C. Moore, P. Tesson and D. Thérien, Equation satisfiability and program satisfiability for finite monoids, *Proc. 25th Int. Symp. on the Mathematical Foundations of Computer Science* (MFCS 2000), Springer LNCS 1893 (2000), pp. 172-181.

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[49] D. Mix Barrington, P. Kadau, K.-J. Lange and P. McKenzie, On the complexity of some problems on groups input as multiplication tables *Proc. 15th IEEE Conf. on Computational Complexity* (CCC 2000), IEEE Computer Soc. (2000), pp. 62-69. Precursor to [13].

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[51] A. Baziramwabo, P. McKenzie and D. Thérien, Modular temporal logic, *Proc. of the 14th IEEE Symp. on Logic in Computer Science* (LICS 1999), IEEE Computer Soc. (1999), pp. 344-351.

[52] P. McKenzie, K. Reinhardt and V. Vinay, Circuits and context-free languages, *Proc. Fifth Annual Int. Computing and Combinatorics Conf.*, (COCOON 1999), Springer LNCS 1627 (1999), pp. 194-203.

[53] C. Lautemann, P. McKenzie, H. Vollmer and T. Schwentick, The descriptive complexity approach to *LOGCFL*, *Proc. 16th Symp. on the Theoret. Aspects of Computer Science* (STACS 1999), Springer LNCS 1563 (1999), pp. 444-454. Precursor to [14].

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[68] P. McKenzie and S.A. Cook, The parallel complexity of the Abelian permutation group membership problem, *Proc. 24th Annual IEEE Symp. on the Foundations of Computer Science* (FOCS 1983), pp. 154-161. Precursor to [27].

Non-refereed contributions

[69] M. Holzer and P. McKenzie, On auxiliary pushdown and stack automata, *Guest column on Complexity Theory* in *ACM Special Interest Group on Algorithms and Computation Theory News*, Vol 33, no 1, mars 2002, pp. 32-45.

Book translation:

[70] B. Bérard, M. Bidoit, A. Finkel, F. Laroussinie, A. Petit, L. Petrucci, P. Schnoebelen, with P. McKenzie, Title: *Systems and Software verification: Model-checking techniques and tools,* Springer (2001), 190 pp. Translated from the French: B. Bérard, M. Bidoit, A. Finkel, F. Laroussinie, A. Petit, L. Petrucci, P. Schnoebelen,, *Vérification de logiciels: Outils et modèles du model-checking*, Vuibert (1999).

General audience:

[71] P. McKenzie, L'informatique, du mammouth au FMI, in *L'Autre Forum, journal du syndicat général des professeurs et professeures de l'Université de Montréal* **8**(2), février 2004, 5-8.

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Ph.D.:

[73] P. McKenzie, Parallel Complexity and Permutation Groups, Ph.D. Thesis, Tech. rep. 173/84, Dept. of Computer Science, Univ. of Toronto, 1984.