

Robin Milner

LIST OF PUBLICATIONS, 2008

Books written

1. **Edinburgh LCF; a Mechanized Logic of Computation**, with *M.J.C. Gordon and C.W. Wadsworth*, LNCS78<sup>1</sup>, 1979 (159 pages).
2. **A Calculus for Communicating Systems**, LNCS92, 1980 (171 pages).
3. **Communication and Concurrency**, Prentice Hall, 1989 (about 260 pages).
4. **Definition of Standard ML**, with *M. Tofte, R. Harper*, MIT Press 1990 (about 100 pages).
5. **Commentary on Standard ML**, with *M. Tofte*, MIT Press 1990 (about 150 pages).
6. **Definition of Standard ML (Revised)**, with *M. Tofte, R. Harper, D. MacQueen*, MIT Press 1997 (about 100 pages).
7. **Communicating and Mobile Systems: the Pi Calculus**, Cambridge University Press, 1999 (160 pages).
8. **The Space and Motion of Communicating Agents**, to appear, Cambridge University Press, 2009 (200 pages).

Books edited

1. **Proc. 3rd Int. Coll. on Automata, Languages and Programming** (ed. with S. Michaelson), Edinburgh University Press, 1976.
2. **Computing Tomorrow**, co-edited with I.C. Wand, Cambridge University Press 1996 (about 350 pages).

Articles as sole author

1. String handling in ALGOL, *British Computer Journal*, Vol 10, 1968, pp321–324.
2. Equivalence on program schemes, *Journal of Computers and Systems Science*, Vol.4, 1970, pp205–219.
3. Program schemes and recursive function theory, *Machine Intelligence 5*, ed. Meltzer and Michie, Edinburgh University Press, 1969, pp39–58.
4. An Algebraic notion of simulation between programs, *Proc. International Joint Conference on Artificial Intelligence*, London, 1971, pp481–489.
5. Implementation and applications of Scott’s logic for computable functions, *Proc. Conference on Proving Assertions about Programs*, New Mexico State University, New Mexico, 1972, pp1–6.
6. A calculus for the mathematical theory of computation, (*invited paper*), *International Symposium on Theoretical Programming*, Novosibirsk, USSR, August 1972. LNCS5, 1974, pp332–343.
7. An approach to the semantics of parallel programs, (*invited paper*), *Conference on Informatics Theory*, Pisa, Italy, 1973, pp285–301.
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<sup>1</sup>In several items, “LNCS $n$ ” stands for Lecture Notes in Computer Science, Vol  $n$ , Springer-Verlag.

9. Program semantics and mechanized proof, Foundations of Computer Science II, Part 2 (eds. Apt and de Bakker) Mathematical Centre Tracts 82, Mathematisch Centrum, Amsterdam, 1976, pp3–44.  
(These and the following paper are the text of 6 invited lectures.)
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12. Fully abstract models of typed  $\lambda$ -calculi, Theoretical Computer Science 4, 1, 1977, pp1–22.
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14. Algebras for communicating systems, (*invited paper*), Proc. AFCET/S.M.F. joint colloquium in Applied Mathematics, Paris, 1978 (14 pages).
15. Synthesis of communicating behaviour, (*invited paper*), Proc. 7th International Symposium on Foundations of Computer Science, Poland, LNCS64, 1978, pp71–83.
16. An algebraic theory for synchronization, (*invited paper*), Proc. 4th G.I. Conference on Theoretical Computer Science, LNCS67, 1979, pp27–35.
17. LCF; a way of doing proofs with a machine, (*invited paper*), Proc. 8th International Symposium on Foundations of Computer Science, Czechoslovakia, LNCS74, 1979, pp146–159.
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28. Process constructors and interpretations, (*invited paper*), Proc IFIP 86 Conference, Dublin, 1986, pp507–514.
29. Dialogue with a proof system, (*invited paper*), Advanced Seminar on Foundations of Innovative Software Development, Pisa, LNCS249, 1987, pp271–275.
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39. An action structure for synchronous  $\pi$ -calculus, (*invited paper*), Proc. FCT Conference, Szeged, Hungary, LNCS, Vol 710, 1993, pp87–105.
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45. Semantic ideas in computing, in **Computing Tomorrow**, ed. Ian Wand and Robin Milner, Cambridge University Press, 1996, pp246–283.
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56. The spectra of words, In *Essays in honour of Jan Willem Klop*, LNCS, 2005.
57. Pure bigraphs: structure and dynamics, *Information and Computation*, Vol 204, 2006, pp60–122.
58. Turing, computing and communication, In *Interactive Computation: The New Paradigm*, Springer, 2006.
59. Scientific foundation for global computing, in *Proc. Trans. on Comput. Syst. Biol. IV* (ed. C. Priami), Keynote Lecture, LNBI 3939, 2006, pp1–13.
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## Joint articles

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2. Program semantics and correctness in a mechanised logic, *with R.W. Weyhrauch*, *Proc. USA–Japan Computer Conference*, 1972, pp384–392.
3. A logic for computable functions with reflexive and polymorphic types, *with L. Morris and M. Newey*, *Conference on Proving and Improving Programs*, Arc-et-Senans, France. Published by IRIA-Laboria, 78150 Le Chesnay, France, 1975, pp371–394.
4. A metalanguage for interactive proof in LCF, *with M. Gordon, L. Morris, M. Newey & C. Wadsworth*, *Proc. 5th annual ACM SIGACT–SIGPLAN Symposium on Principles of Programming Languages*, 1978 (about 20 pages).
5. Concurrent processes and their syntax, *with G. Milne*, *Journal of ACM*, 26, 2, 1979, pp302–321.
6. On observing nondeterminism and concurrency, *with M. Hennessy*, *Proc. 7th International Symposium on Automata Languages and Programming LNCS85*, 1980, pp299–309.
7. Principal type schemes for functional programs, *with L. Damas*, to appear in *Proc. 9th Annual ACM Symposium on Principles of Programming Languages*, 1982 (about 12 pages).
8. Algebraic laws for nondeterminism and concurrency, *with M. Hennessy*, *Journal of ACM*, 32, 1, 1985, pp137–161.
9. A type discipline for program modules, *with R. Harper and M. Tofte*, *Proc Colloquium on Functional and Logic Programming and Specifications*, Pisa, LNCS250, 1987, pp308–319.
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21. Bisimulation congruences for reactive systems, *with James J. Leifer*, Proc. CONCUR2000, LNCS, Vol 1877, 2000, pp243–258.
22. Bigraphs and transitions, *with O.-H. Jensen*, Proc 30th ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages (POPL), 2003, 16pp.
23. Link graphs, transitions and Petri nets, *with J.J. Leifer*, Mathematical Structures in Computer Science, Vol 16, 2006, pp989–1047.
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9. The definition of Standard ML, Version 3, *with Robert Harper, Mads Tofte*, Report ECS-LFCS-89-62, Computer Science Dept, University of Edinburgh, 1988 (90 pages).
10. Action structures, Report ECS-LFCS-92-249, Computer Science Dept, University of Edinburgh, 1992 (47 pages).
11. Action structures for the  $\pi$ -Calculus, Report ECS-LFCS-93-264, Computer Science Dept, University of Edinburgh, 1993 (35 pages).
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