

PROFESSIONAL VITA

John C. Reynolds

February 2012

Present Address

Office: Computer Science Department, Carnegie Mellon University, Pittsburgh, PA 15213 (412) 268-3057

Personal History

Born June 1, 1935, Illinois, U.S. Citizen

Married Mary A. Allen 1960, Children: Edward A. (born 1963), Matthew C. (born 1965)

Education

Harvard University, 1956-61, Ph.D. (Theoretical Physics) 1961, A.M. (Physics) 1957

Purdue University, 1953-56, B.S. with highest distinction 1956

Glenbard High School, Glen Ellyn, Illinois 1949-53

Public Schools of Glen Ellyn, Illinois 1941-49

Employment

Professor of Computer Science, Carnegie Mellon University, 1986-present.

Senior Research Fellow, Imperial College, October-December 2010

Research Professor, Queen Mary, University of London, July-September 2010

Visiting Researcher, Microsoft Research, Cambridge, England, September-November 2007.

Visiting Professor, Aarhus University, August-December 2006, October-December 2003, June-July 2003, May-July 2001, May-June 2000, September-October 1999.

Visiting Fellow, University of Edinburgh, May-June 2005, Aug 2004-Jan 2005, Nov-Dec 1998.

Visiting Professor, Queen Mary, University of London, July 2002-January 2003.

Visiting Fellow, Queen Mary and Westfield College, London, August 1997.

Member of Technical Staff, Software Principles Research Department, Lucent Technologies (Bell Laboratories, Murray Hill, New Jersey), August 1996.

Visiting Fellow, Imperial College of Science, Technology, and Medicine, London, 1994-95.

Professor of Computer and Information Science, Syracuse University, 1970-1986.

Chercheur, Institut National de Recherche en Informatique et en Automatique, Rocquencourt and Sophia Antipolis, France, 1983-84.

Senior Visiting Fellow, University of Edinburgh, 1976-77.

Senior Research Associate, Queen Mary College, London, 1970-71.

Associate Physicist, Applied Mathematics Division, Argonne National Laboratory, 1963-70.

Professorial Lecturer, Committee on Information Sciences, University of Chicago (part-time position), Spring Quarters 1964, 1965, 1968.

Acting Assistant Professor, Computer Science Department, Stanford University, 1965-66.

Assistant Physicist, Applied Mathematics Division, Argonne National Laboratory, 1961-63.

Student Research Associate, Radiological Physics, Argonne National Laboratory, summers of 1956-58.

Student Trainee, Naval Research Laboratory, Washington, D.C., summer of 1955.

Professional Activities and Awards

Lovelace Medal, awarded by BCS, the Chartered Society for IT (the former British Computer Society) 2010

Lecturer, FIRST PhD Fall School on Logics and Semantics of State, IT University, Copenhagen, Denmark, October 20-24, 2008

Lecturer, International Summer School, Marktoberdorf, Germany, August 5-16, 2008

Member, Academia Europaia, 2007-present

Honorary D.Sc. Degree, University of London (Queen Mary and Westfield) July 17, 2007

Dana Scott Distinguished Research Career Award (from Carnegie Mellon University), April 2006.

SIGPLAN Programming Language Achievement Award, June 2003.

Member, Advisory Board, Higher-Order and Symbolic Computation, 2002-present.

Fellow of the Association for Computing Machinery, 2001-present.

Member, Editorial Board, *Mathematical Structures in Computer Science*, 1991-2002.

Principal Investigator, National Science Foundation Grants, "The Design, Definition, and Implementation of Programming Languages", "Reasoning about Low-Level Programming", "Reasoning about Data Structures, Concurrency, and Resources", and "Specification, Verification, and Semantics of Higher-Order and Concurrent Software":

CCF-0916808	July 2009-June 2012	CCR-8922109	June 1990-November 1992
CCF-0541021	April 2006-April 2009	CCR-8620191	November 1986-April 1990
CCR-0204242	Sept. 2002-August 2005	MCS 80-17577	February 1981-June 1986
CCR-9804014	April 1998-March 2001	MCS 75-22002	May 1976-January 1981
CCR-9409997	April 1995-March 1998	GJ-41540	January 1974-June 1976.

Member, IFIP Working Group 2.3 on Programming Methodology, 1969-present.

Member, Association for Computing Machinery, 1962-present.

Lecturer, IFIP WG2.3 State of the Art Seminar/School on Program Design using Logic, Tandil, Argentina, September 6-13, 2000.

Lecturer, ACM State of the Art Summer School, Functional and Object-Oriented Programming, Sobotka, Poland, September 8-14, 1996.

Participant, Semantics of Computation Programme, Newton Institute, Cambridge, UK, July-August 1995.

Co-chairman, Workshop on Syntactic Control of Interference and Linear Logic, Glasgow, July-Aug. 1995.

Coprincipal Investigator, Contract N00014-84-K-0415 with the Defense Advanced Research Project Agency and the Office of Naval Research, "Semantically Based Program-Design Environments" (The Ergo Project), July 1988-September 1992.

Member, IFIP Working Group 2.2 on Formal Language Definition, 1977-1991.

Invited Speaker, IFIP '83 World Computer Conference, Paris, September 1983.

Principal Investigator, U.S. Army Contract DAAK80-80-C-0529, "The Design of an Algol-like Language and an Associated Logic for Program Proving", October 1980-September 1982.

Co-Chairman, U.S.-French Joint Seminar on Algebraic Methods in the Semantics of Programming Languages, Fontainebleau, June 1982.

Member, COSERS Panel on Theoretical Computer Science, 1976-79.

Member, Higher-Order Language Analyses Coordination Panel (Department of Defense), March 1978.

Editor, Programming Languages and Methodology, *Journal of the ACM*, 1973-1975.

Program Chairman, Symposium on Principles of Programming Languages, Palo Alto, January 1975.

ACM Annual Programming Systems and Languages Paper Award (for paper on GEDANKEN, *Comm. ACM*, 13, pp. 308-319), 1971.

Editor, Programming Language Department, *Communications of the ACM*, 1968-70.

Member, American Physical Society, 1959-66.

National Science Foundation Predoctoral Fellow, 1956-60.

National Science Talent Search, 1953.

Papers and Books (sole author unless otherwise indicated)

1. Reddy, Uday S. and Reynolds, J. C., "Syntactic Control of Interference for Separation Logic", *POPL 2012: Proceedings of the 39th Annual ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages*, January 2012, pp. 323--336.
2. O'Hearn, P. W., Yang, H., and Reynolds, J. C., "Separation and Information Hiding", *ACM Transactions on Programming Languages and Systems*, 31(3), 2009, pp. 11:1-58.
3. Torp-Smith, N., Birkedal, L., and Reynolds, J. C., "Local Reasoning about a Copying Garbage Collector", *ACM Transactions on Programming Languages and Systems*, 30(4), 2008, pp. 24:1-58.
4. "Some Thoughts on Teaching Programming and Programming Languages", *Proceedings of the SIGPLAN Programming Language Curriculum Workshop*, *SIGPLAN Notices*, 43(11), November 2008, pp. 108-110.
5. "An Overview of Separation Logic", *Verified Software: Theories, Tools, Experiments*, ed. Meyer B. and Woodcock, J., *Lecture Notes in Computer Science*, 4171, Springer-Verlag, Berlin (2008), pp. 460-469.
6. "Towards a Grainless Semantics for Shared Variable Concurrency", *FSTTCS 2004: Foundations of Software Technology and Theoretical Computer Science*, ed. Lodaya, K. and Mahajan, M., *Lecture Notes in Computer Science* 3328, Springer-Verlag, Berlin (2004), pp. 35-48.
7. Birkedal, L., Torp-Smith, N., and Reynolds, J. C., "Local Reasoning about a Copying Garbage Collector", *Conference Record of POPL 2004: The 31st ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages*, January 2004, pp. 220-231.
8. O'Hearn, P. W., and Yang, H., and Reynolds, J. C., "Separation and Information Hiding", *Conference Record of POPL 2004: The 31st ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages*, January 2004, pp. 268-280.
9. "Separation Logic: A Logic for Shared Mutable Data Structures", *Proceedings Seventeenth Annual IEEE Symposium on Logic in Computer Science*, July 2002, pp. 55-74.
10. O'Hearn, P. W., Reynolds, J. C., and Yang, H., "Local Reasoning about Programs that Alter Data Structures", *Proceedings of 15th Annual Conference of the European Association for Computer Science Logic: CSL 2001*, ed. Fribourg, L., *Lecture Notes in Computer Science* 2142, Springer-Verlag, Berlin (2001), pp. 1-19.
11. "What do Types Mean? - From Intrinsic to Extrinsic Semantics", *Essays on Programming Methodology*, ed. McIver, A. and Morgan, C., Springer-Verlag, 2002.
12. "Intuitionistic Reasoning about Shared Mutable Data Structure", *Millennial Perspectives in Computer Science: Proceedings of the 1999 Oxford-Microsoft Symposium in Honour of Sir Tony Hoare*, ed. Davies, J., Roscoe, A. W., and Woodcock, J. C. P., Palgrave, 2000.
13. O'Hearn, P. W., and Reynolds, J. C., "From Algol to Polymorphic Linear Lambda-Calculus", *Journal of the ACM*, 47 (January 2000) pp. 167-223.
14. "Definitional Interpreters Revisited", *Higher-Order and Symbolic Computation*, 11 (1998), pp. 355-361.

15. Theories of Programming Languages, Cambridge University Press, 1998.
16. "Normalization and Functor Categories", Preliminary Proceedings of the 1998 APPSEM Workshop on Normalization by Evaluation NBE '98, *BRICS Note Series NS-98-1*, University of Aarhus, Denmark, 1998, pp. 24-27.
17. "Beyond ML", *ACM Computing Surveys*, 28A(4), December 1996 (electronic), <http://www.acm.org/surveys/1996/ReynoldsML/>
18. "Using Functor Categories to Generate Intermediate Code", Conference Record of POPL '95: 22nd ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages, January 1995, pp. 25-36.
19. "The Discoveries of Continuations", *Lisp and Symbolic Computation*, 6 (1993), pp. 233-247.
20. Reynolds, J. C., and Plotkin, G. D., "On Functors Expressible in the Polymorphic Typed Lambda Calculus", *Information and Computation*, 105 (July 1993) pp. 1-29. A preliminary version appears in Logical Foundations of Functional Programming, ed. Huet, G., Addison-Wesley, 1990, pp. 127-152.
21. Ma, QingMing, and Reynolds, J. C., "Types, Abstraction and Parametric Polymorphism, Part 2", Proceedings of the 1991 Mathematical Foundations of Programming Semantics Conference, *Lecture Notes in Computer Science*, 598, Springer-Verlag, Berlin (1992), pp. 1-40.
22. "The Coherence of Languages with Intersection Types", Theoretical Aspects of Computer Software; International Conference TACS '91, Proceedings, *Lecture Notes in Computer Science*, 526, Springer-Verlag, Berlin (1991), pp. 675-700.
23. "Syntactic Control of Interference, Part 2", Proceedings of the 16th International Colloquium on Automata, Languages, and Programming, *Lecture Notes in Computer Science*, 372, Springer-Verlag, Berlin (1989), pp. 704-722.
24. "Introduction to Part II (Polymorphic Lambda Calculus)", in Logical Foundations of Functional Programming, ed. Huet, G., Addison-Wesley, 1990, pp. 77-86.
25. Nivat, M., and Reynolds, J. C. (editors), Algebraic Methods in Semantics, Cambridge University Press, 1985.
26. "Three Approaches to Type Structure", Mathematical Foundations of Software Development, eds. Ehrig, H., Floyd, C., Nivat, M., and Thatcher, J., *Lecture Notes in Computer Science*, 185, Springer-Verlag, Berlin (1985), pp. 97-138.
27. "Polymorphism is not Set-Theoretic", Semantics of Data Types, eds. Kahn, G., MacQueen, D. B., and Plotkin, G., *Lecture Notes in Computer Science*, 173, Springer-Verlag, Berlin (1984), pp. 145-156.
28. "Types, Abstraction and Parametric Polymorphism", Information Processing 83, ed. R. E. A. Mason, Elsevier Science Publishers B. V. (North-Holland) 1983, pp. 513-523.
29. "Idealized Algol and its Specification Logic", Tools and Notions for Program Construction, ed. D. Neel, Cambridge University Press (1982), pp. 121-161. Also, Report 1-81, School of Computer and Information Science, Syracuse University, July 1981.
30. "The Essence of Algol", Algorithmic Languages, ed. J. W. de Bakker and J. C. van Vliet, North-Holland, 1981, pp. 345-372.
31. The Craft of Programming, Prentice-Hall International, London, 1981.
32. "Using Category Theory to Design Implicit Conversions and Generic Operators", Semantics-Directed Compiler Generation, Proceedings of a Workshop, Aarhus, Denmark, January 14-18, 1980, ed. N. D. Jones, *Lecture Notes in Computer Science*, 94, Springer-Verlag, New York, pp. 211-258.

33. "Reasoning about Arrays", *Comm. ACM*, 22 (May 1979), pp. 290-299.
34. "Programming with Transition Diagrams", Programming Methodology, A Collection of Papers by Members of IFIP WG 2.3, ed. D. Gries, Springer-Verlag, 1978, pp. 153-165.
35. "Syntactic Control of Interference", Proceedings of the Fifth ACM Symposium on Principles of Programming Languages, January 1978, pp. 39-46.
36. "Semantics of the Domain of Flow Diagrams", *Journal ACM*, 24 (July 1977), pp. 484-503.
37. "User-Defined Types and Procedural Data Structures as Complementary Approaches to Data Abstraction", New Directions in Algorithmic Languages 1975, ed. S. A. Schuman, IFIP Working Group 2.1 on Algol (published by INRIA, Rocquencourt, France), pp. 157-168. Also in Programming Methodology, A Collection of Papers by Members of IFIP WG 2.3, ed. D. Gries, Springer-Verlag, 1978, pp. 309-317.
38. "On the Interpretation of Scott's Domains", *Symposia Mathematica*, 15 (1975), pp. 123-135.
39. "Towards a Theory of Type Structure", Proceedings, Colloque sur la Programmation, Lecture Notes in Computer Science, 19, Springer-Verlag, New York 1974, pp. 408-425.
40. "On the Relation between Direct and Continuation Semantics", Proceedings, Second Colloquium on Automata, Languages, and Programming, Lecture Notes in Computer Science, 14, Springer-Verlag, New York 1974, pp. 141-156.
41. "Definitional Interpreters for Higher-Order Programming Languages", Proceedings 25th National ACM Conference (August 1972), pp. 717-740. Reprinted in *Higher-Order and Symbolic Computation*, 11 (1998), pp. 363-397.
42. "GEDANKEN - A Simple Typeless Language Based on the Principle of Completeness and the Reference Concept", *Comm. ACM*, 13 (May 1970), pp. 308-319.
43. "Transformational Systems and the Algebraic Structure of Atomic Formulas", Machine Intelligence 5, ed. B. Meltzer and D. Michie, Edinburgh University Press (1969), pp. 135-151.
44. "A Generalized Resolution Principle Based Upon Context-Free Grammars", Information Processing 68, ed. A. J. H. Morrell, North-Holland, Amsterdam (1969), 2, pp. 1405-1411.
45. "Automatic Computation of Data Set Definitions", Information Processing 68, ed. A. J. H. Morrell, North-Holland, Amsterdam (1969), 1, pp. 456-461.
46. "An Introduction to the COGENT Programming System", Proc. 20th National ACM Conference (August 1965), pp. 422-436.
47. "Surface Properties of Ground-State Nuclear Matter", *Phys. Rev.*, 130 (June 1963), pp. 1891-1901.
48. Reynolds, J. C., and Puff, R. D., "Volume Properties of Ground-State Nuclear Matter", *Phys. Rev.*, 130 (June 1963), pp. 1877-1890.
49. Miller, W. F., Reynolds, J. C., and Snow, W. J., "Efficiencies and Photofractions for Gamma Radiation on Sodium Iodide (Thallium Activated) Crystals" (letter), *Rev. Sci. Instr.*, 30 (February 1959), p. 141.
50. Miller, W. F., Reynolds, J. C., and Snow, W. J., "Efficiencies and Photofractions for Sodium-Iodide Crystals", *Rev. Sci. Instr.*, 28 (September 1957), pp. 717-719.

Reports (sole author unless otherwise indicated)

1. "The Meaning of Types - From Intrinsic to Extrinsic Semantics", BRICS Research Series RS-00-32, DAIMI, Department of Computer Science, University of Aarhus, December 2000, <http://www.brics.dk/RS/00/32/>.

2. "Design of the Programming Language Forsythe", Carnegie Mellon University CMU-CS-96-146, June 1996.
3. "Preliminary Design of the Programming Language Forsythe", Carnegie Mellon University CMU-CS-88-159, June 21, 1988.
4. "Relational and Continuation Semantics for a Simple Imperative Language", Theorie des Algorithmes, des Langages et de la Programmation, Seminaires IRIA, 1974, pp. 51-58.
5. "Notes on a Lattice-Theoretic Approach to the Theory of Computation", Queen Mary College, July 1971. Reprinted by Syracuse University, October 1972 and March 1979.
6. "A Set-Theoretic Approach to the Concept of Type", working paper for the NATO Science Committee Conference on Techniques in Software Engineering, Rome, October 1969.
7. "GEDANKEN - A Simple Typeless Language Which Permits Functional Data Structures and Coroutines", Argonne National Laboratory ANL-7621, September 1969.
8. "Grammatical Covering", Technical Memorandum No. 96, Applied Mathematics Division, Argonne National Laboratory, March 1968.
9. "COGENT 1.2 Operations Manual", Technical Report CS37, Computer Science Department, Stanford University, April 1966.
10. "COGENT Programming Manual", Argonne National Laboratory ANL-7022, March 1965.
11. "A Proposal for a Micro-Programmed List Processor", Technical Memorandum No. 69, Applied Mathematics Division, Argonne National Laboratory, February 1964.
12. "Performance of a Specific Algebraic Manipulation on a Digital Computer Using the LISP I System", Technical Memorandum No. 45, Applied Mathematics Division, Argonne National Laboratory, May 1963.
13. "Surface and Volume Properties of Ground State Nuclear Matter in the Hartree-Fock and Puff-Martin Approximations", Argonne National Laboratory ANL-6623, October 1962.
14. "A Proposal for a Generalized Compiler", Technical Memorandum No. 33, Applied Mathematics Division, Argonne National Laboratory, August 1962.
15. "Surface Properties of Nuclear Matter", Ph.D. Thesis, Department of Physics, Harvard University, May 1961.
16. "Surface Properties of Nuclear Matter" (abstract), Bull. American Physical Society 6 1, Part 1 (February 1961), p. 78.
17. "A Mathematical Theory of the Retention of Bone-Depositing Radioactive Elements", Radiological Physics Division Semiannual Report, July through December, 1958, Argonne National Laboratory ANL-5967, May 1959, pp. 81-98.
18. Miller, W. F., Reynolds, J. C., and Snow, W. J., "Efficiencies and Photofractions for Gamma Radiation on Sodium Iodide (Thallium Activated) Crystals", Argonne National Laboratory ANL-5902, August 1958.
19. "Analysis of Gamma-Ray Spectra by the Method of Least Squares", Radiological Physics Division Semiannual Report, July through December, 1957, Argonne National Laboratory ANL-5829, February 1958, pp. 61-62.
20. "Calculation of Retention and Elimination of Ra228 and Ra224 from a Single Injection of Th232", Radiological Physics Division Semiannual Report, July through December, 1957, Argonne National Laboratory ANL-5829, February 1958, pp. 51-60.
21. "Variable Energy Neutron Source, Part II. Diffusion of Monochromatic Neutrons by a Spherical Moderator", Radiological Physics Division Semiannual Report, July through December, 1957, Argonne National Laboratory ANL-5829, February 1958, pp. 46-50.

22. Reynolds, J. C., Gustafson, P. F., and Marinelli, L. D., "Retention and Elimination of Radium Isotopes Produced by the Decay of Thorium Parents within the Body -- Calculations and Comparison with Experimental Findings", Argonne National Laboratory ANL-5689, November 1957.

Dissertations Supervised

1. Polakow, Jeff (coadvised by F. Pfenning), "Ordered Linear Logic and Applications", Carnegie Mellon University, August 2001.
2. Filinski, Andrzej (coadvised by R. W. Harper), "Controlling Effects", Carnegie Mellon University, May 1996.
3. Pierce, Benjamin C. (coadvised by R. W. Harper), "Programming with Intersection Types and Bounded Polymorphism", Carnegie Mellon University, December 1991.
4. Connelly, Richard H., "A Comparison of Semantic Domains for Interleaving", Syracuse University, August 1990. (F. L. Morris became Mr. Connelly's advisor when I left Syracuse University.)
5. Narayanan, Badri R., "A General Framework for Models of Type Polymorphism", Syracuse University, December 1988. (F. L. Morris became Mr. Narayanan's advisor when I left Syracuse University.)
6. Oles, Frank J., "A Category-Theoretic Approach to the Semantics of Programming Languages", Syracuse University, August 1982.
7. McCracken, Nancy J., "An Investigation of a Programming Language with a Polymorphic Type Structure", Syracuse University, June 1979.
8. Schwarz, Jerald S., "Semantics of Partial Correctness Formalisms", Syracuse University, December 1974.
9. Hansen, Wilfred J., "Creation of Hierarchic Text with a Computer Display", Stanford University, June 1971, reprinted as Argonne National Laboratory ANL-7818. (Mr. Hansen's advisor at Stanford was W. F. Miller, but I supervised his dissertation research at Argonne.)

Invited Talks

1. "Making Program Logics Intelligible", Lovelace Lecture, London, June 8, 2011.
2. "Automatic Computation of Static Variable Permissions", Mathematical Foundations of Programming Language Semantics, 27th Annual Conference, May 28, 2011.
3. "Readable Proofs in Hoare Logic (and Separation Logic)", European Joint Conferences on Theory and Practice of Software (ETAPS 2009) York, March 25, 2009.
4. "Readable Formal Proofs", Verified Software: Theories, Tools, Experiments, Second International Conference (VSTTE 2008) Toronto, October 6, 2008.
5. "Grainless Semantics without Critical Regions", Mathematical Foundations of Programming Language Semantics, 23rd Annual Conference, Tulane University, New Orleans, April 11, 2007.
6. "Further Towards a Grainless Semantics for Shared Variable Concurrency", Fourth International Symposium on Formal Methods for Components and Objects (FMCO 2005) Amsterdam, November 3, 2005.
7. "Precise, Intuitionistic, and Supported Assertions in Separation Logic", Mathematical Foundations of Programming Language Semantics, 21st Workshop, Birmingham, England, May 21, 2005.
8. "Towards a Grainless Semantics for Shared Variable Concurrency", FSTTCS 2004: Foundations of Software Technology and Theoretical Computer Science, Chennai, India, December 16, 2004.

9. "Types, Abstraction, and Parametric Polymorphism --- For Domains", Mathematical Foundations of Programming Language Semantics, 20th Workshop, Pittsburgh, May 23, 2004.
10. "Towards a Grainless Semantics for Shared Variable Concurrency", The 31st ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages, Venice, January 15, 2004.
11. "Separation Logic: A Logic for Shared Mutable Data Structures", Seventeenth Annual IEEE Symposium on Logic in Computer Science, Copenhagen, July 22, 2002.
12. "Reasoning About Shared Mutable Data Structure" (with P. W. O'Hearn), SPACE 2001: Workshop on Semantics, Program Analysis and Computing Environments for Memory Management, London, January 15-16, 2001.
13. "An Intrinsic Semantics of Intersection Types", Workshop on Intersection Types and Related Systems, Geneva, July 15, 2000.
14. "Reasoning about Shared Mutable Data Structure", Symposium in Celebration of the Work of C. A. R. Hoare, Saint Catherine's College, Oxford, September 15, 1999.
15. "Where Theory and Practice Meet: POPL Past and Future", POPL '98: The 25th ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages, San Diego, January 19, 1998. Slides at <http://www.luca.demon.co.uk/POPL98/InvitedTalks.html>.
16. "The Discoveries of Continuations", Second ACM SIGPLAN Workshop on Continuations, Paris, January 14, 1997.
17. "From Algol to Polymorphic Linear Lambda-Calculus" (with Peter O'Hearn), Linear Logic 96, Tokyo, March 29, 1996.
18. "From Algol to Polymorphic Linear Lambda Calculus", Sixth Biennial Summer Conference on Category Theory and Computer Science, Cambridge, UK, August 11, 1995.
19. "The Interaction between Semantics and Programming Language Design", Themes in the Semantics of Computation, Newton Institute Workshop, Cambridge, UK, July 19, 1995.
20. "Passivity and Linear Types", BRA Workshop on Types for Proofs and Programs, Turin, June 7, 1995.
21. "Passivity and Linear Types" Mathematical Foundations of Programming Semantics XI, New Orleans, April 1, 1995.
22. "An Introduction to Logical Relations and Parametric Polymorphism" (advanced tutorial), Twentieth Annual ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages, Charleston, South Carolina, January 1993.
23. "Parametric Polymorphism, Revisited", Post TACS Workshop at Ryukoku University, Kyoto, Japan, September 1991.
24. "Parametric Polymorphism, Revisited" and "Semantics of Intersection Types" (keynote speaker), London Mathematical Society Symposium on Applications of Categories in Computer Science, Durham, England, July 1991.
25. "Parametric Polymorphism, Revisited", Conference on the Mathematical Foundations of Programming Semantics, Pittsburgh, Pennsylvania, March 1991.
26. "What Do Types Mean?", Conference on the Mathematical Foundations of Programming Semantics, Kingston, Ontario, May 1990.
27. "Syntactic Control of Interference, Part 2", 16th International Colloquium on Automata, Languages, and Programming, Stresa, July 1989.
28. "Syntactic Control of Interference, Part 2", Conference on the Mathematical Foundations of Programming Semantics, Tulane University, March 1989.

29. "Idealized Algol and Conjunctive Types", one-week seminar in the Frontiers of Computer Science Series, University of Texas at Austin, March 1988.
30. "Conjunctive Types and Algol-like Languages", Logic in Computer Science Conference, Cornell University, June 1987.
31. "Expressible Functors in the Polymorphic Typed Lambda Calculus", Categories in Computer Science and Logic, Joint Summer Research Conference in the Mathematical Sciences, University of Colorado at Boulder, June 1987.
32. "Expressible Functors in the Polymorphic Typed Lambda Calculus" and "Conjunctive Types and Algol-like Languages", London Mathematical Society Weekend Computing Science Meeting, University of Sussex (Isle of Thorns), May 1987.
33. "The Polymorphic Typed Lambda Calculus", Association for Symbolic Logic Meeting, Stanford University, July 1985.
34. "The Polymorphic Typed Lambda Calculus", Workshop on Specification and Derivation of Programs, Marstrand, Sweden, June 1985.
35. "Three Approaches to Type Structure", TAPSOFT Advanced Seminar on the Role of Semantics in Software Development, Berlin, March 1985.
36. "Types, Abstraction and Parametric Polymorphism", IFIP '83 World Computer Conference, Paris, September 1983.
37. "Types, Abstraction, and Parametric Polymorphism", Workshop on Types and Polymorphism in Programming Languages, Carnegie-Mellon University, June 1983.
38. "An Introduction to Specification Logic", Workshop on Logics of Programs, Carnegie-Mellon University, June 1983.
39. "Idealized Algol and its Specification Logic", CREST Course on Tools and Notions for Program Construction, Nice, December 1981.
40. "The Essence of Algol", International Symposium on Algorithmic Languages", Amsterdam, October 1981.
41. "Data Representation Structuring", Australian and New Zealand Association for the Advancement of Science, Adelaide, May 1980.
42. "Using Category Theory to Design Implicit Conversions and Generic Operators", Workshop on Programming Languages, University of Kansas, January 1980.
43. "Using Category Theory to Design Implicit Conversions and Generic Operators", Workshop on Semantics-Directed Compiler Generation, Aarhus, Denmark, January 1980.
44. "Data Representation Structuring", Boston SIGPLAN Chapter, October 1979.
45. "Data Representation Structuring", Institute in Computer Science, University of California at Santa Cruz, August 1979.
46. "Thoughts on Domains", Workshop on Continuous Lattices, University of California at Riverside, March 1979.
47. "On the Interpretation of Scott's Domains", Convegno di Informatica Teorica, Istituto di Alta Matematica, Citta Universitaria, Rome, Italy, February 1973.
48. "Definitional Interpreters for Higher-Order Programming Languages", National ACM Conference, Boston, August 1972.
49. "Lattice-Theoretic Methods for Programming Language Definition", International Summer School on Program Structures and Fundamental Concepts of Programming, 11 lectures, Marktoberdorf, Germany, July 1971.
50. "A Set-Theoretic Approach to the Concept of Type", NATO Science Committee Conference on Techniques in Software Engineering, Rome, Italy, October 1969.

51. "Methods of Data Set Definition", Working Conference on Extensible Languages, Carnegie-Mellon University, December 1968.
52. "COGENT Revisited", SICPLAN Workshop on Compiler-Building Tools, Atlantic City, New Jersey, April 1967.
53. "A Compiler and Generalized Translator", dinner speech, Chicago ACM Chapter, February 1963.

Colloquia and Seminars

University of Aarhus	Microsoft Research, Cambridge
University of Adelaide	Microsoft Research, Redmond
University of Alberta	Monash University
Argonne National Laboratory	National Science Foundation
University of Bath	U. of Newcastle Upon Tyne
Bell Laboratories, Murray Hill	U. of New South Wales
University of Birmingham	New York University
University of British Columbia	University of Nijmegen
British Computer Society (London)	North Carolina State University
Brown University	Northwestern University
SUNY Buffalo	University of Notre Dame
U. of California at Berkeley	Oxford University
U. of California at San Diego	University of Paris
U. of California at Santa Cruz	U. of Pennsylvania (Philadelphia)
Cambridge University	University of Pisa
Carnegie Mellon University	POOL, Midwestern Regional Meeting
University of Chicago	Purdue University
Control Data Corp., Palo Alto	Queen Mary College
COOP (CDC 3600 Users Group)	Queen's University of Belfast
University of Copenhagen	Queen's University, Kingston
Cornell University	University of Queensland
Deakin University	University of Rochester
Digital Equipment Corp. SRC	Rome Air Force Development Center
Duke University	University of Rome
Ecole Normale Superieure	Seoul National University
University of Edinburgh	University of Southern California
Glasgow University	Stanford University
Harvard University	University of Sussex
IBM Vienna Laboratory	Sydney University
IBM Yorktown Heights	University of Technology, Sydney
Illinois Institute of Technology	Syracuse University
IT University of Copenhagen	University of Tasmania
University of Illinois	University of Texas at Austin
Imperial College (London)	University of Toronto
INRIA Rocquencourt	University of Turin
INRIA Sophia Antipolis	Warwick University
Kansas State University	University of Waterloo
University of Manchester	University of Wisconsin
Massachusetts Institute of Technology	University of Wollongong
McMaster University	Xerox PARC
University of Melbourne	Yale University