

Curriculum Vitæ of Robert I. Soare

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November 17, 2010

1 Educational Record

- A.B. Princeton University, 1963.
- Ph.D. in Mathematics, Cornell University, 1967.

2 Professional Record

1994–present Paul Snowden Russell Distinguished Service Professor of Mathematics and Computer Science, University of Chicago.

1974–present Professor of Mathematics, University of Chicago.

Mar. 2011–Jul. 2011 Visiting Fellow, Isaac Newton Institute for Mathematical Sciences, Centennial year celebrating Alan Turing.

Sept. 1989–Dec. 1989 Member, Mathematical Sciences Research Institute, Berkeley, CA.

1988–1989 Visiting Professor, University of Heidelberg, Heidelberg, Germany.

1983–1987 Founding Chairman, Department of Computer Science, University of Chicago.

1982–1983 Senior Research Fellow, partially supported by British Science and Engineering Research Council, staying mainly at University of Leeds, with extended visits to Oxford University, Cambridge University, University of Manchester, and University of Bristol.

1967–1973 Assistant Professor to Full Professor of Mathematics, University of Illinois at Chicago.

2.1 Editorial Duty:

1997–2009 A Managing Editor, *Annals of Pure and Applied Logic*.

1993–2002 Editor, *Mathematical Logic Quarterly*.

1982–2003 Editor, *Information and Computation*.

1983–1987 Advisory Editor, *Annals of Pure and Applied Logic* (Journal formerly called *Annals of Mathematical Logic*).

1971–1975 Associate Editor, *Proceedings American Mathematical Society*.

2.2 Honorary Societies:

Phi Beta Kappa
Society of Sigma Xi

2.3 Professional Societies:

Association for Symbolic Logic
American Mathematical Society

3 Invited Addresses at Leading Congresses

The most prestigious congress is the *International Congress of Mathematicians*, and next the *International Congress for Logic, Methodology and Philosophy of Science*. The *Association for Symbolic Logic* is the primary logic association in the U.S. and around the world. Its Centennial Meeting in

June, 2000 was to celebrate the turn of the century, and the plenary speakers were selected from leading scholars around the world. The organization *Computability in Europe* has grown extremely fast and has already attracted several hundred members in mathematics, computer science, and related areas.

Jun. 2007 Plenary speaker at Computability in Europe (CiE) Conference on Computation and Logic in the Real World, Siena, Italy, June 18–23, 2007.

Jun. 2000 Plenary speaker at Centennial Meeting of the Association for Symbolic Logic, Urbana, Illinois.

Aug. 1995 International Congress for Logic, Methodology and Philosophy of Science, Florence, Italy.

Aug. 1991 International Congress for Logic, Methodology and Philosophy Uppsala, Sweden.

Aug. 1979 International Congress for Logic, Methodology and Philosophy of Science, Hanover, Germany.

Aug. 1978 International Congress of Mathematicians, Helsinki, Finland.

4 Other Selected Invited Addresses

Mar. 2011 North American Annual Meeting of Association for Symbolic Logic, Special Session on Definability Throughout Mathematical Logic, in honor of Leo Harrington.

Jan. 2007 Topics in Computability, A meeting in honor of Richard Shore, Boston, Mass., Jan 21–22, 2007.

Aug. 2006 MATHLOGAPS Workshop, University of Leeds, Leeds, England, Aug. 21–25, 2006, five one hour lectures.

Jan. 2002 American Mathematical Society Special Session on Computability Theory, San Diego, CA. Robert Soare and his graduate student, Barbara Csima, were both invited speakers on their joint work for twenty minutes each.

- Jun. 1999** A.M.S. Workshop in Computability Theory and Applications, Boulder, Colorado. (One hour.)
- Jul. 1997** European Summer Meeting of the Association for Symbolic Logic, Leeds, England. (One hour plenary speaker.)
- Jul. 1997** Conference in Computability and Complexity, Kazan, Russia. (One hour lecture on mathematics plus TV interview conducted in Russian.)
- Mar. 1996** University of Wisconsin, just prior to meeting of Association for Symbolic Logic. (One hour lecture on Kleene.)
- Jan. 1996** Conference on Computability Theory, Oberwolfach, Germany. (One hour lecture on computability plus one hour lecture on the work of S.C. Kleene.)
- Jul. 1994** Conference on Computability Theory, University of Leeds, Leeds, U.K. (One hour lecture.)
- Mar. 1994** Association for Symbolic Logic, Gainesville, FL. (One hour lecture.)
- May, 1993** Sacks Symposium, A Symposium in Honor of Gerald Sacks on the Occasion of his Sixtieth Birthday, MIT, Cambridge, Mass. (One hour lecture.)
- Jun. 1992** Logical Methods in Mathematics and Computer Science, A Symposium in Honor of Anil Nerode on the Occasion of his Sixtieth Birthday, Cornell University, Ithaca, NY. (One hour lecture.)
- Oct. 1989** Conference on Set Theory and the Continuum Hypothesis, at Math. Sci. Research Institute, in Berkeley, CA. (One hour lecture.)
- Mar. 1989** Conference on Recursion Theory (organized by G. E. Sacks), Oberwolfach, W. Germany. (One hour lecture opening conference.)
- Oct. 1987** Third Southeast Asian Conference on Mathematical Logic, Beijing, China. (One hour.)

- Oct. 1984** Second Southeast Asian Logic Conference on *Logic and its Relation to Mathematics and Computer Science*, Bangkok, Thailand. (One hour lecture.)
- Apr. 1984** Conference on Recursion Theory (organized by G. E. Sacks), Oberwolfach, W. Germany. (Forty-five minute lecture.)
- Jul. 1983** Association for Symbolic Logic, Annual European Summer Meeting, Aachen, W. Germany. (Two one hour lectures.)
- Apr. 1983** European Conference on Mathematical Logic, Oberwolfach, W. Germany. (One hour lecture.)
- Jul. 1982** American Math. Soc. Summer Research Institute, Cornell University. (Four one hour lectures.)
- Jul. 1981** Herbrand Memorial Logic Colloquium, Société Française de Logique, Methodologie et Philosophie des Sciences. European ASL summer meeting, Marseilles, France. (One hour lecture.)
- Aug. 1979** British logic colloquium '79 on recursion theory, its generalizations and applications, Leeds, England. (Four one hour lectures.)

5 Ph.D. Students Whom Soare Supervised:

1. Craig Smorynski (Ph.D. 1973, Mathematical Logic), University of Illinois at Chicago.
2. Victor Bennisson (Ph.D. 1976, Computer Science, University of Chicago); subsequently at Digital Equipment Corporation, and other computer companies.
3. Michael Stob (Ph.D. 1979, Computability Theory); 1979–1981 Moore Instructor in Mathematics, M.I.T.; 1987, Visiting Assistant Professor of Mathematics, University of Wisconsin, Madison, 1983–84; currently Professor of Mathematics, and Dean of the College, Calvin College, Grand Rapids, MI.
4. Peter Fejer (Ph.D. 1980, Computability Theory); 1980–1983, NSF Post-doctoral Fellow and H.C. Wang Assistant Professor of Mathematics,

Cornell University; 1983-present: Professor and Chairman, Department of Science, U. Mass., Boston.

5. David Miller (Ph.D. 1981, Computability Theory); 1981–present, Professor of Computer Science, Chairman and Dean, DePaul University.
6. Steven Schwarz (Ph.D. 1982, Computability Theory); 1982–83, NSF Postdoctoral Fellow at M.I.T.; 1983–86, Assistant Professor in Computer Science Section of Department of Mathematics, Tufts University; currently working in the computer industry.
7. Steffen Lempp (Ph.D. 1986, Computability Theory); 1986–88, Gibbs Instructor of Mathematics, Yale University; 1988–present, Professor of Mathematics, University of Wisconsin, Madison.
8. Kevin Wald, (Ph.D. 1999, Computability Theory); 1999–2002, Postdoctoral fellow, Univ. of Connecticut, Storrs, CT, currently working in industry in Boston.
9. Russell Miller (Ph.D. 2000, Computability Theory); 2000–2003 H.C. Wang Assistant Professor of Mathematics, Cornell University, 2004–present: Associate Professor of Mathematics, Queens College CUNY, New York.
10. Barbara Csima, (Ph.D. 2003, Computability Theory); 2003–2005 H.C. Wang Assistant Professor of Mathematics, Cornell University; 2005–present: Associate Professor of Mathematics, Waterloo University, Canada.
11. Kenneth Harris (Ph.D. 2007); 2007–2010 Assistant Professor, University of Michigan.
12. Karen Lange (Ph.D. 2008); 2008–2011 accepted NSF Postdoctoral Fellowship and Assistant Professorship at Notre Dame, 2011–present Tenure track Assistant Professor of Mathematics, Wellesley College, MA.
13. Chris Conidis (Ph.D. 2009); 2009–2012 Postdoctoral Fellow at Fields Institute, Toronto, and Assistant Professor of Mathematics, University of Waterloo.
14. Rachel Epstein (Ph.D. 2010); 2010–2013 Benjamin Peirce Assistant Professor of Mathematics, Harvard University.

15. Damir Dzhafarov (Ph.D. expected in June, 2011)
16. David Diamondstone (Ph.D. expected in June, 2011)
17. Matthew Wright (2007–)
18. Jonathan Stephenson (2008–)
19. Eric Astor (2009–)

(The students after 2000 have been supervised by Soare jointly with Professor Denis Hirschfeldt.)

6 Postdoctoral Fellows Soare Supervised:

1. Sy Friedman; Ph.D. MIT, 1976; 1976-1978, Dickson Instructor, University of Chicago; later Professor of Mathematics, MIT, and presently Professor of Mathematics at the University of Vienna, Austria.
2. David Posner; Ph.D. 1976, Univ. of California at Berkeley; 1976-1978, Dickson Instructor, University of Chicago; later Assistant Professor of Mathematics, San Jose State University, and computer science consultant to computer industries in the area; currently working in computer industry.
3. Phokion Kolaitis; Ph.D. 1978, UCLA; 1979-1981, Dickson Instructor, University of Chicago; Assistant Professor of Mathematics, Occidental College, 1981–84, and 1985–86; Visiting Assistant Professor UCLA; 1986–1987, worked at IBM Almaden; presently Professor of Computer Science, Univ. of California at Santa Cruz.
4. Theodore Slaman; Ph.D. 1981, Harvard; 1981–1983, NSF Postdoctoral Fellow University of Chicago; 1983–1996, Assistant Professor to Professor of Mathematics, University of Chicago; 1996–present, Professor and Chairman of Mathematics, Univ. of California at Berkeley, CA.
5. Stuart Kurtz; Ph.D. 1981, University of Illinois at Champaign-Urbana; 1981–1983, Dickson Instructor University of Chicago; 1983–present, Assistant Professor to Professor and Chairman of Department of Computer Science, University of Chicago.

6. Christine Haught; Ph.D. 1985, Cornell University; 1987-1990, Dickson Instructor and NSF Postdoctoral Fellow, University of Chicago, currently Professor of Mathematics at Loyola University, Chicago.
7. Todd Hammond; Ph.D. 1990, Univ. of California at Berkeley; 1990–1994, Dickson Instructor and NSF Postdoctoral Fellow, University of Chicago; Currently Professor of Mathematics at Truman State University, Missouri.
8. David Seetapun; Ph.D. 1991, University of Cambridge, UK; 1991-1993, Dickson Instructor and NSF Postdoctoral Fellow, University of Chicago; currently in academics in computer science.
9. Andre Nies; Ph.D. 1992, University of Heidelberg; 1995–2002, Assistant Professor of Mathematics, University of Chicago; Currently Assistant Professor of Computer Science, University of Auckland, New Zealand.
10. Denis Hirschfeldt; Ph.D. 1999, Cornell University; 2000–2008, Dickson Instructor, Assistant, Associate, and Full Professor of Mathematics, The University of Chicago.
11. Joseph Mileti; Ph.D. 2004, University of Illinois at Champaign Urbana; 2004–2007, Dickson Instructor and VIGRE postdoctoral fellow, University of Chicago; 2007–2010, Postdoc Dartmouth College.
12. Antonio Montalban, Ph.D. 2005, Cornell University; 2005–2007, Dickson Instructor, University of Chicago, 2007–2010, Assistant Professor of Mathematics, University of Chicago.

7 Books

Soare’s book [1987] has become the primary reference on computability theory for students and scholars doing research. It has been translated into Russian and has been published in a Russian edition. It has also been printed in China with the original English text for the mathematics and surrounding comments in Chinese. This reflects the great popularity of the subject in Russia and China.

Soare is now working on a new computability book [CTA]. This will become the major book on the subject for mathematicians and computer scientists.

1. Co-editor, *Logic Year 1979–80, University of Connecticut*, Lecture Notes in Mathematics No. 859, Springer-Verlag, 1981.
2. R. I. Soare, *Recursively Enumerable Sets and Degrees: A Study of Computable Functions and Computably Generated Sets*, Springer-Verlag, Heidelberg, 1987.
3. R. I. Soare, *Computability Theory and Applications: The Art of Turing Computability* [CTA], Springer-Verlag, to appear in 2012.

8 Publications in Elite Journals

The best journals for papers in mathematics are probably: *The Annals of Mathematics*, *The Journal of the American Mathematical Society*, and *The Proceedings of the National Academy of Science*. Soare has published five papers in these three elite journals over his career.

1. R. I. Soare, Automorphisms of the lattice of recursively enumerable sets I: maximal sets, *Annals of Mathematics* **100** (1974), 80–120.
2. L. Harrington and R. I. Soare, Post’s Program and incomplete recursively enumerable sets, *Proc. Natl. Acad. of Sci. USA*, **88** (1991), 10242–10246.
3. T. Slaman and R.I. Soare, Algebraic aspects of the computably enumerable degrees, *Proc. Natl. Acad. of Sci. USA*, **92** (1995) 617–621.
4. L. Harrington and R.I. Soare, The Δ_3^0 -automorphism method and non-invariant classes of degrees, *Journal of the Amer. Math. Soc.*, **9** (1996), 617–666.
5. T. Slaman and R.I. Soare, Extension of embeddings in the computably enumerable degrees, *Annals of Mathematics*, **154** (2001), 1–43.

9 Other Journal Articles

- (1969a) Sets with no subsets of higher degree, *J. Symbolic Logic*, **34** (1969), 53–56.

- (1969b) Recursion theory and Dedekind cuts. *Trans. Amer. Math. Soc.*, **140** (1969), 271–294.
- (1969c) A note on degrees of subsets, *J. Symbolic Logic*, **34** (1969), 256.
- (1969d) Constructive order types on cuts, *J. Symbolic Logic*, **34** (1969), 285–289.
- (1969e) Cohesive sets and recursively enumerable Dedekind cuts, *Pacific J. Math.*, **31** (1969), 215–231.
- (1970a) (with R. O. Gandy) A problem in the theory of constructive order types, *J. Symbolic Logic*, **35** (1970), 119–121.
- (1970b) (with C. G. Jockusch, Jr.) Minimal covers and arithmetical sets, *Proc. Amer. Math. Soc.*, **25** (1970), 856–859.
- (1971) (with C. G. Jockusch, Jr.) A minimal pair of Π_1^0 classes, *J. Symbolic Logic*, **26** (1971), 66–78.
- (1972a) (with C. G. Jockusch, Jr.) Degrees of members of Π_1^0 classes, *Pacific J. Math.*, **40** (1972), 605–616.
- (1972b) (with C. G. Jockusch, Jr.) Π_1^0 classes and degrees of theories *Trans. Amer. Math. Soc.*, **173** (1972), 33–35.
- (1972c) The Friedberg-Muchnik theorem re-examined, *Canadian J. of Math.*, **24** (1972), 1070–1078.
- (1973a) (with C. G. Jockusch, Jr.) Encodability of Kleene’s \mathcal{O} , *J. Symbolic Logic*, **38** (1973), 437–440.
- (1973b) (with C. G. Jockusch, Jr.) Post’s problem and his hypersimple set, *J. of Symbolic Logic*, **38** (1973), 446–452.
- (1974a) Automorphisms of the lattice of recursively enumerable sets, *Bull. Amer. Math. Soc.*, **80** (1974), 53–58.
- (1974b) Automorphisms of the lattice of recursively enumerable sets I: maximal sets, *Ann. of Math.* **100** (1974), 80–120.

- (1974c) Isomorphisms of countable vector spaces with recursive operations, *J. of the Australian Math. Society*, **18** (1974), 230–235.
- (1975) (with M. D. Morley) Boolean algebras, splitting theorems, and Δ_2^0 sets. *Fund. Math.*, **90** (1975), 45–52.
- (1976) The infinite injury priority method, *J. Symbolic Logic*, **41** (1976), 513–530.
- (1977) Computational complexity, speedable and levelable sets, *J. Symbolic Logic*, **42** (1977), 545–563.
- (1978a) (with V. Bennison) Some lowness properties and computational complexity sequences, *Theoretical Computer Science*, **6** (1978), 233–254.
- (1978b) Recursively enumerable sets and degrees, *Bull. Amer. Math. Soc*, **84** (1978), 1149–1181.
- (1978c) (with M. Lerman and R. Shore) r -Maximal major subsets, *Israel J. Math.*, **31** (1978), 1–18.
- (1978d) Recursive enumerability, Proceedings of the International Congress of Mathematicians, Helsinki, 1978, 275–280.
- (1980a) (with M. Lerman) d -Simple recursively enumerable sets, *Pacific J. of Mathematics*, **87** v (1980), 135–155.
- (1980b) (with M. Lerman) A decidable fragment of the elementary theory of the recursively enumerable sets, *Trans. Amer. Math. Soc.*, **257** (1980), 1–37.
- (1980c) Fundamental methods for constructing recursively enumerable degrees, In: Recursion theory, its generalizations and applications, Logic Colloquium 79, Leeds, England, August 1979, London Mathematical Society Lecture Note Series 45, Cambridge University Press, 1980.
- (1980d) (with A. H. Lachlan) Not every finite lattice is embeddable in the recursively enumerable degrees, *Advances in Mathematics*, **37** (1980), 74–82.

- (1981a) Constructions in the recursively enumerable degrees, In: Proceedings of C.I.M.E. conference on “Recursion Theory and Computational Complexity,” Bressanone, Italy, June 1979, published by Liguori Editore, Naples, Italy, 1981.
- (1981b) (with P. Fejer) The plus cupping theorem in the recursively enumerable degrees, Proceedings of Logic Year 1979–80 at the University of Connecticut, Lecture Notes in Mathematics No. 859, Springer-Verlag, 1981.
- (1982a) Automorphisms of the lattice of recursively enumerable sets. II: Low sets, *Annals of Mathematical Logic*, **22** (1982), 69–107.
- (1982b) Computational complexity of recursively enumerable sets. *Information and Control* **52** (1982), 8–18.
- (1982c) (with M. Stob) Relative recursive enumerability, In: Proceedings of the Herbrand Symposium Logic Colloquium '81, Marseilles, France, editor, J. Stern, North-Holland, Amsterdam, (1982), 299–324.
- (1984a) (with M. Lerman and R.A. Shore) The elementary theory of the recursively enumerable degrees is not \aleph_0 -categorical, *Advances in Math*, **53** (1984), 301–320.
- (1984b) (with K. Ambos-Spies, C.G. Jockusch, Jr., and R. Shore) An algebraic decomposition of the recursively enumerable degrees and the coincidence of several degree classes with the promptly simple degrees, *Trans. Amer. Math. Soc.* **281** (1984), 109–128.
- (1984c) (with J. Knight and A. H. Lachlan) Two theorems on degrees of models of true arithmetic, *J. Symbolic Logic* **49** (1984), 425–436.
- (1985) Tree arguments in recursion theory and the $\mathbf{0}'''$ -priority method, In: Nerode and Shore (editors), Recursion Theory, Proc. Symp. Pure Math. *42*, Proceedings of the AMS-ASL Summer Institute on Recursion Theory, held at Cornell University June 28–July 16, 1982, Amer. Math. Soc., Providence, R. I., 1985, 53–106.
- (1986) (with D. Cenzer, P. Clote, R. Smith, and S. Wainer) Members of countable Π_1^0 classes, *Annals of Pure and Applied Logic* **31** (1986), 145–163.

- (1989a) (with C. G. Jockusch, Jr., M. Lerman, and R. M. Solovay) Recursively enumerable sets modulo iterated jumps and extensions of Arslanov's completeness criterion, *J. Symbolic Logic* **54** (1989), 1288–1323.
- (1989b) (with K. Ambos-Spies) The recursively enumerable degrees have infinitely many one types, *Annals of Pure and Applied Logic* **44** (1989), 1–23.
- (1990) (with K. Ambos-Spies, and S. Homer) Minimal pairs and complete problems, Proceedings of Seventh Annual Symposium on Theoretical Aspects of Computer Science, February, 1990, Rouen, France, C. Choffrut and T. Lengauer (editors), Lecture Notes in Computer Science, vol. 415, Springer-Verlag, Berlin, Heidelberg, New York, (1990) 24–36.
- (1991a) (with C. G. Jockusch, Jr.) Degrees of orderings not isomorphic to recursive linear orderings, *Annals of Pure and Applied Logic* **52** (1991), 39–64.
- (1991b) (with L. Harrington) Post's Program and incomplete recursively enumerable sets, *Proc. Natl. Acad. of Sci. USA*, **88** (1991), 10242–10246.
- (1991c) (with S. B. Cooper, L. Harrington, A. H. Lachlan, and S. Lempp) The d.r.e. degrees are not dense, *Annals of Pure and Applied Logic*, **55** (1991), 125–151.
- (1992) (with L. Harrington) Games in recursion theory and continuity properties of capping degrees, in: Set Theory and the Continuum, Proceedings of Workshop on Set Theory and the Continuum, October, 1989, MSRI, Berkeley, CA, edited by H. Judah, W. Just, and W. H. Woodin, Springer-Verlag, 1992, 39–62.
- (1993) (with K. Ambos-Spies, and A. H. Lachlan) The continuity of capping to $\mathbf{0}'$, *Annals of Pure and Applied Logic*, **64** (1993), 195–209.
- (1994a) (with K. Ambos-Spies, and S. Homer) Minimal pairs and complete problems, *Theoretical Computer Science*, **132** (1994), 229–241.

- (1994b) (with A. H. Lachlan) Models of arithmetic and upper bounds for arithmetic sets, *J. of Symbolic Logic*, **59** (1994), 977–983.
- (1994c) (with C. G. Jockusch, Jr.) Boolean algebras, Stone spaces, and the iterated Turing jump, *J. of Symbolic Logic*, **59** (1994), 1121–1138.
- (1995) (with T. Slaman) Algebraic aspects of the computably enumerable degrees, *Proc. Natl. Acad. of Sci. USA*, **92** (1995), 617–621.
- (with L. Harrington) Dynamic properties of computably enumerable sets, In: ‘Computability, Enumerability, Unsolvability: Directions in Recursion Theory,’ eds. S. B. Cooper, T. A. Slaman, S. S. Wainer, Proceedings of the Recursion Theory Conference, University of Leeds, July, 1994, London Math. Soc. Lecture Notes Series, Cambridge University Press, January 1996.
- (1996b) (with L. Harrington) Definability, Automorphisms, and Dynamic Properties of Computably Enumerable Sets, *Bulletin of Symbolic Logic* **2** (1996), 199–213.
- (1996c) Computability and recursion, *Bulletin of Symbolic Logic* **2** (1996), 284–321.
- (1996d) (with L. Harrington) The Δ_3^0 -automorphism method and non-invariant classes of degrees, *Journal of the Amer. Math. Soc.*, **9** (1996), 617–666.
- (1997) Computability and enumerability, Proceedings of the 10th International Congress for Logic, Methodology and the Philosophy of Science, Section 3: Recursion Theory and Constructivism, Florence, August 19–25, 1995, In: Logic and Scientific Methods, ed. M.L. Dalla Chiara, K. Doets, D. Mundici, and J. van Benthem, Kluwer Academic Publishers, The Netherlands, 1997, 221–237.
- (1998a) (with L. Harrington) Definable properties of the computably enumerable sets, Proceedings of the Oberwolfach Conference on Computability Theory, *Annals of Pure and Applied Logic*, **94** (1998), 97–125.
- (1998b) (with L. Harrington) Codable Sets and Orbits of Computably Enumerable Sets, *Journal of Symbolic Logic*, **63** (1998), 1–28.

- (1998c) (with A. H. Lachlan) Subuniform bounds for arithmetic sets, *Journal of Symbolic Logic*, **63** (1998), 59–72.
- (1999a) An overview of the computably enumerable sets, In: *Handbook of Computability Theory*, ed. E. Griffor, North-Holland, Amsterdam, 1999, 199–248.
- (1999b) The history and concept of computability, In: *Handbook of Computability Theory*, ed. E. Griffor, North-Holland, Amsterdam, 1999, 3–36.
- (2000) Extensions, Automorphisms, and Definability, in: P. Cholak, S. Lempp, M. Lerman, and R. Shore, (eds.) *Computability Theory and its Applications: Current Trends and Open Problems*, American Mathematical Society, Contemporary Math. #257, American Mathematical Society, Providence, RI, 2000. pps. 279–307.
- (2001) T. Slaman and R. I. Soare, Extension of embeddings in the computably enumerable degrees, *Annals of Math.*, **154** (2001), 1–43.
- (2004a) R. I. Soare, Computability theory and differential geometry, *Bull. Symb. Logic*, Vol. 10 (2004), 457–486.
- (2004b) B. F. Csimá, D. R. Hirschfeldt, J. F. Knight, and R. I. Soare, Bounding prime models, *J. Symbolic Logic*, vol. 69 (2004), pp. 1117–1142.
- (2006) B. F. Csimá and R.I. Soare, Computability Results Used in Differential Geometry, *J. Symbolic Logic*, vol. 71 (2006), pp. 1394–1410.
- (2007a) B. F. Csimá, V. Harizanov, D. R. Hirschfeldt, and R. I. Soare, Bounding Homogeneous Models, *J. Symbolic Logic*, vol. 72 (2007), pp. 305–323.
- (2007b) K. Lange and R.I. Soare, Computability of Homogeneous Models, in: *Proceedings of the Workshop on Vaught’s Conjecture*, Notre Dame University, May, 2005, *Notre Dame Journal of Formal Logic*, vol. 48, (2007), pp. 143–170.

- (2007c) R. I. Soare, Computability and Incomputability, Computation and Logic in the Real World, in: Proceedings of the Third Conference on Computability in Europe, CiE 2007, Siena, Italy, June 18–23, 2007, Lecture Notes in Computer Science, No. 4497, S.B. Cooper, B. Löwe, Andrea Sorbi (Eds.), Springer-Verlag, Berlin, Heidelberg, 2007.
- (2009) R. I. Soare, Turing Oracle Machines, Online Computing, and Three Displacements in Computability Theory, *Annals of Pure and Applied Logic*, 160 (2009), 368–399.
- (2010) D. Diamondstone, D. Dzhafarov and R. I. Soare, Π_1^0 -Classes, Peano Arithmetic, Randomness, and Computable Domination, *Notre Dame Journal of Formal Logic*, 50th Anniversary Issue, vol. 51 (2010), 127–159.
- (2012a) R. I. Soare, *Computability Theory and Applications: The Art of Turing Computability* [CTA], Springer-Verlag, 2012, to appear.
- (2012b) R. I. Soare, Turing-Post Relativized Computability and Interactive Computing, in: Jack Copeland, Carl Posy, and Oron Shagrir, *Computability: Gödel, Church, Turing, and Beyond*, MIT Press, 2012, to appear.