Stark, W Richard

Curriculum Vitae

SCHOOL ADDRESS

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Educational Qualifications

Year	Degree	Major	Institution
1975	Ph.D.	Mathematics	Univ of Wisconsin
	B.A.	Mathematics and Physics	Univ of Kentucky, Lexington

Academic Experience

Year		Role
08/1996	University of South Florida	
08/1994 - 08/1998	University of South Florida	
01/1990	University of South Florida	
08/1978 - 07/1996	University of South Florida	

Journal Publications

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1. Stark, W. Richard, Finite Automata on infinite trees and subtheories of SKS (by A. Mostowski), *Mathematical Reviews*.
2. Stark, W. Richard, On natural complete sets and Gödel numberings (by J. Hartmanis), *Mathematical Reviews*.
3. Stark, W. Richard, The ultimate equivalence of iterated homeomorphisms is recursively unsolvable (by M. Karpinski), *Mathematical Reviews*.
4. Stark, W. Richard, Some remarks on the Lewis modal system SS (by Gao Hengshan), *Mathematical Reviews*.
5. Stark, W. Richard, On cellular graph automata and second-order definable graph-properties (by Gy Turan), *Computing Reviews*.
6. Stark, W. Richard, The complexity of the validity for dynamic logic (by K. Manders), *Mathematical Reviews*.
7. Stark, W. Richard, Interpreting second-order arithmetic in the monadic theory or order (by Y. Gurevich), *Mathematical Reviews*.
8. Stark, W. Richard, Propositional dynamic logic of programs: a survey (by Rohit Parikh), *Mathematical Reviews*.
9. Stark, W. Richard, "Deterministic propositional dynamic logic: finite models, complexity and completeness (by Ben-Ari, Halpern & Pnueli), *Mathematical Reviews*.
10. Stark, W. Richard, "Dynamic parallel memories (by Vishkin & Wigderson), *Computing Reviews*.
11. Stark, W. Richard, "Parallel language recognition in constant time by cellular automata (by Sommerhalder & Westrhenen), *Computing Reviews*.
12. Stark, W. Richard, "Distributive semantics for nondeterministic typed lambda-calculus (by E. Astesiano & G. Costa), *Computing Reviews*.
13. Stark, W. Richard, "The glory of the past (temporal logic) (by Lichtenstein, Pnueli & Zuck), *Mathematical Reviews*.
14. Stark, W. Richard, "Effectively given domains and λ-calculus models (by Paola & Longo), *Computing Reviews*.
15. Stark, W. Richard, "Applications of circumscription to formalizing common-sense knowledge, (by John McCarthy), *Mathematical Reviews*.
16. Stark, W. Richard, "On the satisfiability of circumscription (by Lifschitz), *Mathematical Reviews*.
17. Stark, W. Richard, "Completeness results for circumscription (by Perlis & Minker), *Mathematical Reviews*.
18. Stark, W. Richard, "A program logic with quantifiable propositional variables" (by Orlowska), *Mathematical Reviews*.
19. Stark, W. Richard, "Linear and branching structures in the semantics and logics of reactive systems" (by Pnueli), *Mathematical Reviews*.
20. Stark, W. Richard, "A computational interpretation of truth logic" (by R. J. R. Black), *Mathematical Reviews*.
21. Stark, W. Richard. "Brain Power by Shadbolt." *IEEE Intelligent Systems* (2003).
22. Stark, W. Richard. "A brief history of cellular automata." *ACM Comp. Surveys, a review for ACM CR* (2001).
23. Stark, W. Richard, "Asynchronous Irregular Automata Nets: the Path Not Taken" (BioSystems, v.55, p.107-127, 2000)
24. Stark, W. Richard. "2-by-n hybrid cellular automata." *IEEE Trans. Comp., a review for ACM CR* (2000).
25. Stark, W. Richard. "Weakly Connected Neural Networks (Frank Hoppensteadt) (a full-length, professional-level Springer book)." *Computing Reviews* (1998).
26. Stark, W. Richard. "On the complementation of asynchronous cellular Büchi automata (by Anca Muscholl)." *ACM"s Computing Reviews* (1997).
27. Stark, W. Richard. "Artificial Life: The Quest for a New Creation (Steven Levy)." *Computing Reviews* (1993).
28. Stark, W. Richard, W.Edwin Clark, Gregory L. Mccolm. "On the complexity of deadlock-free programs on a ring of processors" *J. of Parallel and*

Distributed Computing 16:1 (1992): 67-71.

29. Stark, W. Richard. "Token systems that self-stabilize (by Brown, Gouda, Wu)." *Computing Reviews* (1990).
30. Stark, W. Richard. "The social metaphor for distributed computing" *Computing Reviews* (1990).
31. Stark, W. Richard. "A logic for distributed processes" *Zeitsch math. Logik u. Grundlagen d. math.* 35:4 (1989): 311-320.
32. Stark, W. Richard, and Leon Kotin. "The traveling salesman problem: some approximate algorithms" *Congressus Numeratium* (1989).
33. Stark, W. Richard. "The social metaphor for distributed processing" *Journal of Parallel and Distributed Computing* 7:1 (1989): 125-147.
34. Stark, W. Richard. "The Illusion of Reality (a text by Howard Resnikoff, published by Springer)." *Computing Reviews* (1989).
35. Stark, W. Richard. "The laws of Occam programming (by Roscoe & Hoare, Theoretical Computer Science)." *Mathematical Reviews* (1989).
36. Stark, W. Richard. "Distributed Computing: Structure and Complexity (by H. L. Bodlaender)." *Computing Reviews* (1988).
37. Stark, W. Richard. "Truth, Negation and Contradiction (by G.H. Wright)." *Mathematical Reviews* (1988).
38. Stark, W. Richard. "Parallel processing of encoded bit strings (A. Wu & A. Rosenfield)." *Mathematical Reviews* (1988).
39. Stark, W. Richard. "Connectionist architectures for artificial intelligence (S. Fahlman & G. Hinton)." *Computing Reviews* (1987).
40. Stark, W. Richard. "Applications of the connection machine (D. Waltz)." *Computing Reviews* (1987).
41. Stark, W. Richard. "Neural Networks for Computing (Amer. Inst. of Physics Conference 151)." *Applied Artificial Intelligence Reporter* (1987).
42. Stark, W. Richard, and Leon Kotin. "Thoughts on mechanical societies: or distributed processing in a random and changing environment" *Congressus Numeratium* 60 (1987): 221-242.
43. Stark, W. Richard. "Logic Programming (a refereed technical correspondence)." *Communications of the ACM* 29 (1986)
44. Stark, W. Richard. "A completeness theorem for dynamic logic (G. Laszlo)." *Mathematical Reviews* (1985).
45. Stark, W. Richard, and Leon Kotin. "A parallel minimum spanning tree algorithm in LISP" *Congressus Numeratium* (1985)
46. Stark, W. Richard. "A glimpse into the paradise of combinatory algebra" *International Journal of Computer and Information Sciences* 13:3 (1984): 219-236.
47. Stark, W. Richard. "Parameterized models of distributed processes" *Cybernetica* 27:4 (1984).
48. Stark, W. Richard. "Combinatory automata" *Association of Computing Machinery's SIGACT News* (1984).
49. Stark, W. Richard. "Homeostasis in synchronous distributed computations: a formal view" *Information Sciences* 30:4 (1983): 151-169.
50. Stark, W. Richard. "A logic of knowledge" *Zeitsch math. Logik u. Grundlagen d. math.* 27:4 (1981): 371-374.
51. Stark, W. Richard. "Martin's axiom in the model theory of L_A." *Journal of Symbolic Logic* 45:1 (1980): 172-186.
52. Stark, W. Richard. "Automatic model construction" *Information Sciences* 22:2 (1980): 90-102.
53. Stark, W. Richard. "Type heirarchies and type level reduction" *Cybernetica* 22:5 (1979): 17-31.
54. Stark, W. Richard. "A measure of subgroup diversity" *Journal of Algebra* 61:2 (1979): 308-310.
55. Stark, W. Richard. "A forcing approach to $\prod_1^1$ reflection and $\prod_1^{\wedge 1} = \sum_1^0$ ", *Zeitsch. math. Logik u. Grundlagen d. math.* 24:5 (1978): 467-479.
56. Stark, W. Richard. "Automatic construction of finite models." *Notices of the AMS* (1978).
57. Stark, W. Richard. "An application of Martin's Axiom in group theory." *Notices of the AMS* (1977).
58. Stark, W. Richard. "A new compactness theorem for infinitary logic" *Notices of the AMS* (1975).
59. Stark, W. Richard. "A general method of anlaysis for $st¡C\_1^1$ reflection and its application in logic" *Notices of the AMS* (1974).
60. Stark, W. Richard. "Amorphous Computing: Examples, Mathematics and Theory", in *Natural Computing* (2013) v.12, pp.377-399.
61. Stark, W. Richard. "Random Choice in Amorphous Computing", under review for *Natural Computing*, June 2013.
62. Stark, W. Richard, "Amorphous Computing in the Context of the Partial Recursive Functions", nearly completed November, 2013.

Books and chapters in book

1. Biological Computation, E. Lamm, R. Unger, Chapman&Hall, 344p., 2011. Review by W Richard Stark, *Computing Reviews*, August 2011.
2. Stark, W. Richard. "Artificial Tissue" *Computing with Biological Metaphors*. London: Chapman & Hall, 1994.
3. Stark, W. Richard. "Terribly technical writing" in *Writing and Publishing for Academic Authors*. New York: University Presses of America, 1992.
4. Stark, W. Richard. ***LISP, Lore and Logic***, New York and Berlin: Springer-Verlag, 1990.

Presentations

1. Stark, W. Richard, An Analytical Approach to Asynchronous Processes, (NATO) *International Workshop on Cells and Tissue Modeling in Mathematics, Indianapolis*, August 1999.
2. Stark, W. Richard, Ulam's Asynchronous Cellular Automata Problem -- the Solution, invited presentation at the *Pacific Rim Conference on Mathematics*, City University of Hong Kong, 20 January 1998.
3. Stark, W. Richard, Asynchronous Automata Nets as an Artificial Tissue Model, invited colloquium talk, Chinese University of Hong Kong, 22 January 1998.
4. Stark, W. Richard; Beliaev, Alexey, Non-Linear Analysis and Differential Equations in an Unusual Product space, presented to the International Conference on Non-Linear Differential Equations, Kiev, August 1997.
5. Stark, W. Richard, A Novel Nonlinear Dynamics, invited presentation to Second World Congress of IFNA, Athens, July 1996.
6. Stark, W. Richard, International Workshop on Information Processing in Cells and Tissues, Liverpool, 8 September 1995.
7. Stark, W. Richard, Abstract Dynamics for a Problem in Biology, International Conference on Nonlinear Differential Equations and Dynamics, Kiev, August 1995.
8. Stark, W. Richard, and John Pedersen. *Mathematics for a Fundamental Problem in Biological Information Processing*. Washington, D.C.: IEEE International Conf. on Intelligence in Neural and Biological Systems, 1995.
9. Stark, W. Richard; Pedersen, John, Mathematics for a Fundamental Problem in Biological Information Processing, IEEE International Conf. on Intelligence in Neural and Biological Systems, Washington, D.C., 29 May 1995.
10. Stark, W. Richard, John Pedersen, and Stephen Suen. *Graph Isomorphisms and the Evolution of Cooperation*. Boca Raton, Fl: The Boca Raton Combinatorics and Graph Theory Conf., 1994.
11. Stark, W. Richard; Pedersen, John; Suen, Stephen, Graph isomorphism and the evolution of cooperation, *Graph Theory Conference*, Boca Raton, 1994.
12. Stark, W. Richard, Topological methods for the analysis of distributed processes, *Mathematics & Computer Science Departments*, SUNY Binghamton, March 1993.
13. Stark, W. Richard, Algebraic Tissue -- A mathematical model, invited 1-hour featured presentation at the *2nd Annual Ulam Mathematics Conference*, Palm Beach, 4 April 1991.
14. Stark, W. Richard, A topological approach to proving properties of asynchronous distributed computations, *Mathematical Issues in Biologically Motivated Computing*, Special Session of the AMS Conference, Tampa, 23 March 1991.
15. Stark, W. Richard; Jefferson, David, A tutorial on artificial life, invited 3-hour tutorial at **IBM**, Tampa, 21 March 1991.

16. Stark, W. Richard, LDP: A Logic for distributed processes, presented to *Southeastern Logic Symposium*, Miami Beach, March 1990.
17. Stark, W. Richard; Kotin, Leon, The traveling salesman problem: some approximate algorithms, presented to the *19th International Conference on Combinatorics, Graph Theory, and Computing*, Baton Rouge, February 1988.
18. Stark, W. Richard; Kotin, Leon, Thoughts on mechanical societies: or distributed computing in random and changing architectures, presented to the *17th International Conference on Combinatorics, Graph Theory, and Computing*, Boca Raton, February 1986.
19. Stark, W. Richard, Types of distributed processes, invited talk given to the *Mathematics Department of Stephens Institute of Technology*, November 1985.
20. Stark, W. Richard; Kotin, Leon, A parallel minimum spanning tree algorithm in LISP, presented to the *16th International Conference on Combinatorics, Graph Theory and Computing*, Boca Raton, February 11-15, 1985.
21. Stark, W. Richard, Abstract algebra in theoretical computer science, an invited presentation to the Mathematics Department of Stetson University, DeLand, Florida, 1983.
22. Stark, W. Richard, LISP and functional computing. An invited talk for the *IEEE Computer Society* (South Florida chapter), Tampa, 1983.
23. Stark, W. Richard, Automatic construction of finite models, presented to the *84th Annual Convention of the American Mathematical Society*, Atlanta, 1978.
24. Stark, W. Richard, A decision procedure for the logic of knowledge, presented at the <u>Stanford Artificial Intelligence Laboratory</u>, Stanford University, 1978.
25. Stark, W. Richard, An application of Martin's Axiom in group theory. A paper presented to the *83rd Annual Convention of the American Mathematical Society*, St. Louis, 1977.
26. Stark, W. Richard, Hilbert's program and the controversy in the foundations of mathematics, presented to the *Mathematics Department of Stephen F. Austin State University*, 1976.
27. Stark, W. Richard, Godel's theorem and unsolvable problems in mathematics, presented at Texas Christian University, 1976.
28. Stark, W. Richard, A new compactness theorem for infinitary logic, presented to the *81st Annual Convention of the American Mathematical Society*, Washington, D.C., 1975.

Teaching and Research Interests

- Analytic, logical, and algebraic theory of parallel computation and distributed processes
- Random and asynchronous packet switching networks
- Asynchronous cellular automata, biological information processing, amorphous information processing
- Mathematical logic
- Analysis

Professional Societies/Associations

Year	Society/Association	Role
	Sigma Xi	Member
	American Mathematical Society	Member
	Mathematical Association of America	Member
	Association for Computing Machinery	Past Member
	International Association for Cybernetics	Member
	American Academy for the Advancement of Science	Past Member
	New York Academy of Sciences	Past Member
	Union of Concerned Scientists	Past Member
	Association for Symbolic Logic	Past Member
	IEEE Computer Society	Past Member

Governance/Committees

Year	Name of Committee	Role	Institution
08/2007 - 05/2008	Advisory Committee	Member	USF, Department of Mathematics and Statistics
08/2006 - 05/2007	Publicity Committee	Member	USF, Department of Mathematics
08/2005 - 05/2006	New Appointments Committee	Chair	USF, Department of Mathematics
08/2005 - 05/2006	Honors and Awards Committee	Member	USF, College of Arts & Sciences