Curriculum Vitae
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Education

A.B. Dartmouth College, 1968.
Ph.D. Massachusetts Institute of Technology, 1976.

Academic Positions

Myra M. Sampson Professor Emeritus of Mathematics and Statistics, Smith College, 2018-
Myra M. Sampson Professor of Mathematics and Statistics, Smith College, 2011-2018
Professor of Mathematics and Statistics, Smith College, 1988-2011
Associate Professor of Mathematics, Smith College, 1983-88.
Visiting Lecturer, University of the Philippines, Diliman, 1980.
Assistant Professor of Mathematics, Smith College, 1976-83.
Math Teacher, Burgundy Farm Country Day School, Alexandria, VA, 1971-73.
Visiting Instructor, U. Philippines College in Baguio, 1968-1970 (Peace Corps).

Fellowships, Grants, and Awards

Woodrow Wilson, 1968.
National Science Foundation 1970-71, 1973-75.
Fulbright Lectureship, University of the Philippines, Diliman, 1980.
National Science Foundation DMS-8413736, 1984-87
National Science Foundation INT-8513211, 1986-88
National Science Foundation DMS-8616774, 1987-89
National Science Foundation DMS-8808101, 1988
National Science Foundation USE-8951485, 1989
National Science Foundation DMS-9006205, 1990-93
Dana Foundation, 1990-95.
National Science Foundation ADVANCE-0602110, 2006-2010
National Science Foundation DMS-1143716, 2012-2017

David P. Robbins Prize of the Mathematical Association of America (with Frederick Henle), 2014

Research Papers

1. **"A combinatorial proof of a combinatorial theorem" (with E. M. Kleinberg), *Acta Mathematica* 26(1-2)):3-7, 1975.**
2. **"Aspects of choiceless combinatorial set theory," doctoral dissertation, M.I.T., 1976.**
3. **"Some consequences of an infinite-exponent partition relation," *Journal of Symbolic Logic* 42(4):523-526, 1977.**
4. **"A flipping characterization of Ramsey cardinals" (with E. M. Kleinberg), *Zeitschrift f. Mathematische Logik und Grundlagen d. Mathematik* 24:31-36, 1978.**
5. **"On the compactness of $\aleph_1$ and $\aleph_2$" (with C. A. Di Prisco), *Journal of Symbolic Logic* 42(4):394-401, 1977.**
6. **"γ-Ramsey and γ-ineffable cardinals," *Israel Journal of Mathematics* 30(1-2):85-98, 1978.**
7. **"Researches into the world of $\kappa \to (\kappa)^\kappa$," *Annals of Mathematical Logic* 17:151-169, 1970.**
8. **"The Axiom of Determinateness and canonical measures," *Fundamenta Mathematicae* 114:183-194, 1981.**
9. **"On a certain prewellordering" (with W. Zwicker), *Fund. Mat.* 114:195, 1981.**
10. **"Ultrafilters on spaces of partitions" (with W. Zwicker), *J. Sym. Logic* 47(1):137-146, 1982.**
11. **"Supercontinuity" (with A. R. D. Mathias), *Mathematical Proceedings of the Cambridge Philosophical Society* 92(1):1-16, 1982.**
12. **"Magidor-like and Radin-like forcing," *Annals of Pure and Applied Logic* 25:59-72, 1983.**
13. **"A Translation Invariant Measure," (with S. Wagon) *The American Mathematical Monthly* 90:62-63, 1983.**
14. **"Filters for square-bracket partition relations" (with E. M. Kleinberg and A. Kanamori), *Zeit. f. Mat. Logik* 30(2):183-192, 1984.**
15. **"Infinite subscripts from infinite exponents" (with J. Baumgartner), *J. Sym. Logic* 49(2):558-562, 1984.**
16. **"Spector forcing," *J. Sym. Logic* 49(2):542-554, 1984.**
17. **"Weak strong partition cardinals," *J. Sym. Logic* 49(2):555-557,**

1984.

18. **"On the ultrafilters and ultrapowers of strong partition cardinals" (with E. M. Kleinberg and R. Watro), *J. Sym. Logic* 49(4): 1268-1272, 1984.**

19. **"An extravagant partition relation for a model of arithmetic," *Contemporary Mathematics* 31:109-113, 1984.**

20. **"A barren extension" (with A. R. D. Mathias and H. Woodin), *Methods in Mathematical Logic, Proceedings,* Caracas 1983. Lecture Notes in Mathematics No. 1130, Springer-Verlag, 1985:195-207.**

21. **"Ultimate Stochastic Entities" (with D. W. Cohen), *International Journal of Theoretical Physics* 24(4):329-341, 1985.**

22. **"Sorts of huge cardinals" (with C. A. Di Prisco), *Proceedings of the Fifth Latin-American Symposium on Mathematical Logic, Revista Columbiana de Mathematicas* 19:69-75, 1985.**

23. **"Large cardinal structures below $\aleph_\omega$" (with A. Apter), *J. Sym. Logic* 51(3):591-603, 1986.**

24. **"Concerning ultrafilters on ultrapowers," *J. Sym. Logic* 52(1): 149-151, 1987.**

25. **"Filter spaces: Towards a unified theory of large cardinal and embedding axioms" (with A. Apter, C. A. Di Prisco, and W. Zwicker), *Ann. of Pure and Applied Logic* 41:93-106, 1989.**

26. **"Filter spaces II: Limit ultrapowers and iterated embeddings" (with A. Apter, C. A. Di Prisco, and W. Zwicker), *Acta Cientifica Venezolana* 40:311-318, 1989.**

27. **"Bases for the closed unbounded filter" (with C. A. Di Prisco and G. Mendez), *Bulletin of the Polish Academy of Sciences Mathematics* 37(7-12):619-628, 1989.**

28. **"Partition properties and Prikry-forcing on simple spaces," *J. Sym, Logic* 55(3):938-47, 1990.**

29. **"The Normal Depth of Filters on an Infinite Cardinal" (with C. A. DiPrisco and M. Fuller), *Zeitschrift fur Matematische Logik* 36:293-296, 1990.**

30. **"Relative consistency results via strong compactness" (with A. Apter), *Fundamenta Mathematicae* 139:133-149, 1990.**

31. **"On box, weak box, and strong compactness" (with A. Apter), *Bulletin of the London Mathematical Society* 24:513-518, 1992.**

32. **"Partitions of products" (with C. A. DiPrisco), *J. Sym. Logic* 58(3):860-871, 1993.**

33. "The consistency of one fixed omega," *J. Sym. Logic* 60(1):172-177, 1995.

34. "Partitions of the Reals and Choice" (with C. A. Di Prisco), *Models, Algebras, and Proofs*, Xavier Caicedo and Carlos Monenegro, ed., Marcel Dekker, Inc., 1999 .

35. "The calculus of partition sequences, changing cofinalities, and a question of Woodin" (with A. W. Apter and S. C. Jackson), *Transactions of the A.M.S.*, 352(3):969-1003, 2000.

36. "Doughnuts, floating '2's, and ultraflitters" (with C. A. Di Prisco), *Journal of Symbolic Logic*, 65(1): 461-473, 2000.

37. "Non-nonstandard Analysis: *Real* Infinitesimals," *The Mathematical Intelligencer*, 21(1):67-73, 1999.

38. "Second-order Non-nonstandard Analysis," *Studia Logica* 74(3): 399-426, 2003.

39. "Where the Camera Was" (with Katherine Byers), *Mathematics Magazine*, 77(4): 251-259, 2004.

40. "Calculus on strong partition cardinals," *Mathematical Logic Quarterly* 52(6): 461-474, December, 2006.

41. "Squaring the plane," (with F. V. Henle), *The American Mathematical Monthly* 115(1): 3-12, January, 2008.

42. "Squaring and Not Squaring One or More Planes," (with F. V. Henle), *The On-line Journal of Analytic Combinatorics*, issue 10, http://www.math.rochester.edu/ojac/articles.html, 2015.

43. "Nimrod" (with Emma Schlatter), *The Journal of Recreational Mathematics* 36(1): 42-8, 2011.

44. "Possibilities and Impossibilities in Square-Tiling," (with A. M. Berkoff, A. E. McDonough, and A. P. Wesolowski), *Int. J. of Computational Geometry and Applications* 21(5): 545-558, 2011.

45. "Creating Clueless Puzzles" (with Gerard Butters, Frederick Henle, and Colleen McGaughey), *The Mathematical Intelligencer*, 33(3):102-107, 2011.

46. "Blank Sudoku," with Sonia Brown, Christine Niccoli, and Bayla Weick, *MAA Focus*, 33(3): 27, The American Mathematical Society, June/July, 2013.

47. "The Mystery of the Sealed Box" (with F. V. Henle), *The Mathematical Intelligencer*, 36(2): 18-26, 2014.

48. "Puzzling and Apuzzling Graphs" (with Daphne Gold, Cherry Huang, Tia Lyve, Tara Marin, Jasmine Osorio, Mäneka Puligandla, Bayla Weick, Jing Xia, He Yun, Jize Zhang), *AKCE In-*

ternational Journal of Graphs and Combinatorics, 13, pp. 1-10, 2016.

49. "Paying Our Way Out of a Crisis," *The American Mathematical Monthly* 127(6): 544, July, 2020.

Book Chapters

50. "Is Inequality One-Dimensional?" (with Nicholas Horton and Stephanie Jakus), *Modelling Income Distributions and Lorenz Curves: Essays in Memory of Camilo Dagum*, Jacques Silber, editor, Springer, 2008.

51. "A Problem and a Recipe," *Gathering △ Gardner Exchange Book*, 197-199, 2011.

52. "Squaring the plane," (with F. V. Henle), paper #41 anthologized in *Martin Gardner in the Twenty-first Century*, edited by Michael Henle and Brian Hopkins, pp. 143-152, The Mathematical Association of America, 2013.

53. "Mathematical Treasures from Sid Sackson," column #98 anthologized in *The Best Writing on Mathematics, Year 2020*, edited by Mircea Pitici, pp. 92-107, Princeton University Press, 2020.

Expository, Philosophical, and Pedagogical Papers

54. "You Too Can Be a Computer, or Part of One," *The Mathematics Teacher* 65(6):553-559, 1972.

55. "Functions with arbitrarily small periods," *American Mathematical Monthly* 87(10):816, 1980.

56. "Impossibility in mathematics," *Matimyas Mathematicas* 4(4):4-9, 1980.

57. "Tangent planes with infinitesimals," *Am. Math. Monthly* 91(7):433-435, 1984.

58. "The happy formalist," *The Mathematical Intelligencer*, 13(1):12-18, 1991.

59. "The Pyramid Exam" (with D. W. Cohen), *UME Trends* 7(3):2, 1995.

60. "Classical Mathematics. Baroque Mathematics. Romantic Mathematics? Also Atonal, New Age, Minimalist, and Punk Mathematics," *The American Mathematical Monthly*, 103(1):18-29, 1996.

61. "You Can Be Talking Calculus! In Just 13 Weeks!" (with David Cohen), *Newsmith*, Fall, 1998.

62. **"Spending My Surplus," Op-ed page, *The New York Times*, 3/5/01.**

63. **"The Alternating Harmonic Series," *The Mathematical Intelligencer*, 29(2):4, 2007.**

64. **"What a Mathematician Looks Like" (with Ruth Haas), *Notices of the American Mathematical Society*, 54(8):957 September, 2007, Chinese translation, *Mathematical Advance in Translation*, Academy of Mathematics and Systems Science, Chinese Academy of Sciences, (30)1: 79, Beijing, 2011.**

65. **"The Center for Women in Math at Smith College" (with Ruth Haas), *Math Horizons*, February, 2007.**

66. **"No Free Lunch" (with D. W. Cohen), *The American Mathematical Monthly*, 115(8): 768, 2008.**

67. **"WIMIN 08" (with Ruth Haas), *AWM Newsletter*, 39(1):17-19, 2009.**

68. **"Teaching Tip: Accepting that $.999\ldots = 1$" (with D. W. Cohen), *The College Mathematics Journal*, 40(4):258, 2009.**

69. **"The Exercise That Keeps On Exercising" (with D. W. Cohen), in preparation.**

70. **"A Pretty Small Crossword Puzzle—with Two Entirely Different Answers," *The American Mathematical Monthly*, 118(2):115,160, 2011.**

71. **"Is (Some) Mathematics Poetry?," *Journal of Humanistic Mathematics*, 1(1): 94-100, 2011.**

72. **"The Many Rewards of Putting Absolutely Everything into Introductory Logic," *Proceedings of the Third International Congress on Tools for Teaching Logic 2011*, *Lecture Notes in Computer Science*, v. 6880.**

73. **"Instant Replay for Presidential Debates: A Logical Move," *Insight*, 2012, http://www.smith.edu/insight/stories/logic.php.**

74. **"Mathematics, spaghetti alla carbonara, and you," *The Conversation, U.S.*, June 19, 2015, https://theconversation.com/mathematics-spaghetti-alla-carbonara-and-you-42650.**

75. **"J. H. Conway and the End of the Story of Numbers," to appear, *The Mathematical Intelligencer*.**

Columns

76. **"Success and Failure," *The Mathematical Intelligencer*, 35(3):**

50-53, 2013.

77. "Elegance," *The Mathematical Intelligencer*, 35(4): 75-77, 2013.

78. "What Kind of ... Are You?," *The Mathematical Intelligencer*, 36(1): 64-6, 2014.

79. "Italian, or French?," *The Mathematical Intelligencer*, 36(2): 62-3, 2014.

80. "Celebrity Chefs," *The Mathematical Intelligencer*, 36(3): 79-80, 2014.

81. "Exactness," *The Mathematical Intelligencer*, 36(4): 98-101, 2014.

82. "The Wine Column," *The Mathematical Intelligencer*, 37(1): 86-8, 2015.

83. "Less is More, More or Less," *The Mathematical Intelligencer* 37(2): 84-7, 2015.

84. "Surprise!," *The Mathematical Intelligencer* 37(3): 75-78, 2015.

85. "Getting Philosophical," *The Mathematical Intelligencer* 37(4): 84-86, 2015.

86. "The Minus and Plus of Hi-tech," *The Mathematical Intelligencer* 38(1): 74-77, 2016.

87. "A Tasting Menu," *The Mathematical Intelligencer* 38(2): 65-68, 2016.

88. "Persistence," *The Mathematical Intelligencer* 38(3): 78-80, 2016.

89. "Knowing and Seeking," *The Mathematical Intelligencer* 38(4): 62-64, 2016.

90. "The Chinese Leftovers Theorem," *The Mathematical Intelligencer* 39(1): 2017.

91. "The Same, Only Different," *The Mathematical Intelligencer* 39(2): 60-63, 2017.

92. "The Wages of Progress," *The Mathematical Intelligencer* 39(3): 73-76, 2017.

93. "The Payoff," *The Mathematical Intelligencer* 39(4): 62-65, 2017.

94. "Meaning to Please," *The Mathematical Intelligencer* 40(1): 68-72, 2018.

95. "The Entertainer," *The Mathematical Intelligencer* 40(2): 76-80, 2018.

96. "Puzzle Ninja Ninja," *The Mathematical Intelligencer* 40(3): 63-67, 2018.

97. "Baseball Retrograde Analysis," *The Mathematical Intelligencer* 40(4): 71-76, 2018.

98. "Mathematical Treasures from Sid Sackson," *The Mathematical Intelligencer* 41(1): 71-77, 2019.

99. "Mad Math," *The Mathematical Intelligencer* 41(2): 35-41, 2019.

100. "A Mathematical Art," *The Mathematical Intelligencer* 41(3): 28-32, 2019.

101. "Numeralogy," *The Mathematical Intelligencer* 41(4): 22-27, 2019.

102. "A Flowering of Mathematical Art," *The Mathematical Intelligencer* 42(1): 36-40, 2020.

103. "Romantic Mathematical Art (Part I)," *The Mathematical Intelligencer* 42(2): 70-77, 2020.

104. "Romantic Mathematical Art (Part II)," *The Mathematical Intelligencer* 42(3): 57-64, 2020.

105. "Math for grades 1 to 5 should be Art," *The Mathematical Intelligencer* 42(4): 64-69, 2020.

106. "The Artist," to appear, *The Mathematical Intelligencer*.

107. "Art for One," to appear, *The Mathematical Intelligencer*.

Reviews

108. "*Numbers, Sets, and Axioms* by A. G. Hamilton," *J. Sym. Logic* 49(4): 1421, 1984.

109. "*Real Analysis Through Modern Infinitesimals* by Nader Vakil," with Michael Henle, *The American Mathematical Monthly*, 120(10): 949-953, 2013.

Books

110. *Numerous Numerals*, National Council of Teachers of Mathematics, 1975.

111. *Infinitesimal Calculus* (with E. M. Kleinberg), M. I. T. Press, 1979. Second printing, Dover, 2003.

112. *An Outline of Set Theory*, Springer-Verlag, 1986; Japanese translation, 1988, Russian translation, 19??, possibly by S. I. Travkin. Second printing, Dover, 2008.

113. *Sweet Reason: A Field Guide to Modern Logic* (with Thomas Tymoczko), W. H. Freeman & Co., 1995. Second printing, Key

College Publishing, 2000, Spanish translation (*Razón, Dulce Razón*), 2002.

114. *Calculus: The Language of Change* (with David Cohen), 2005, Jones and Bartlett, Publishers.

115. *Sweet Reason: A Field Guide to Modern Logic*, second edition, (with Thomas Tymoczko and Jay Garfield), Wiley-Blackwell, 2011.

116. *The Proof and the Pudding*, 2015, Princeton University Press, also translations into Japanese and Mandarin.

117. *The Baseball Mysteries: A Memoir*, with Jerry Butters, in preparation

Websites

118. *Sweet Reason*, http://sweetreason2ed.com/, for students and readers of *Sweet Reason: A Field Guide to Modern Logic*.

119. *Sweet Reason for Instructors*, http://sweetreason2ed.com/docent/, for instructors using *Sweet Reason: A Field Guide to Modern Logic*.

120. *The Mystery of the Sealed Box*, enigmatists.net/Boxes/, containing results generated by the paper, "The Mystery of the Sealed Box," (number 47 in this *Vitae*).

121. *More Proofs and More Puddings*, http://www.science.smith.edu/proofandthepudding/, the companion website for the book, *The Proof and the Pudding*.

122. *Cucina Matematica*, http://www.science.smith.edu/cucinamatematica/, the companion website for the *Mathematical Intelligencer* column, *Cucina Matematica*.

123. *For Our Mathematical Pleasure*, http://www.science.smith.edu/~jhenle/pleasingmath/, the companion website for the *Mathematical Intelligencer* column, *For Our Mathematical Pleasure*.

124. *The Ring-a-Ding Numeration System*, http://www.science.smith.edu/~jhenle/Ringading/, containing animations of arithmetic operations using Ring-a-Ding.