

## *FABIO AUGUSTO MILNER*

### **EDUCATION**

Bachiller	Colegio Nacional de Buenos Aires	1971
Licenciado en Ciencias Matemáticas	University of Buenos Aires	1976
M.S.	University of Chicago	1979
Ph.D.	University of Chicago	1983

### **ACADEMIC AND RESEARCH PROFESSIONAL EXPERIENCE**

Teaching Assistant	University of Buenos Aires	1974-75
Research & Teaching Assistant	University of Buenos Aires	1976-78
Lecturer	University of Buenos Aires	1978
Teacher of H.S. Math. & Physics	Buenos Aires	1978
Instructor	Central YMCA Com. College	1979-81
Data Analyst & Statistician	University of Chicago	1979-82
Lecturer	University of Chicago	1981-82
Lecturer	Elmhurst College	1981-82
Instructor	De Paul University	1982-83
Research Associate	University of Chicago	1983
Assistant Professor	Purdue University	1983-89
Instructor	Chicago State University	1984
Associate Professor	2 <sup>nd</sup> University of Rome (Italy)	1987-92
Research Associate	University of Trento (Italy)	1988-
Research Associate	Institute "Mauro Picone" (Rome, Italy)	1988-94
Associate Professor	Purdue University	1989-94
Visiting Professor	University of Bordeaux II, France	June-July 1991
Professor	Purdue University	1994-2008
Faculty Convenor	Human Ecology, Global Studies Program Purdue University	1994-2002
Visiting Professor	University of Bordeaux II, France	July 1995
Visiting Professor	Nankai University, Tianjin, China	Oct. 1996
Visiting Professor	University of Trento, Italy	Dec. 1996
Visiting Professor	University of Bordeaux II, France	June 1998
Visiting Professor	Nankai University, China	May 2000
Visiting Professor	University of Trento, Italy	May-June 2001
Visiting Professor	University of Palermo, Argentina	July 2001
Visiting Professor	University of Trento, Italy	Jan.-July 2003
Visiting Professor	University of Puerto Rico Mayagüez, Puerto Rico	Jan.-July 2004
Visiting Professor	University of Bordeaux II, France	May-June 2006
Visiting Professor	University of Trento, Italy	June-July 2006
Professor	Arizona State University	2008-
Director, First Year Mathematics	Arizona State University	2008-09
Director, Mathematics STEM Ed.	Arizona State University	2009-

### **MATHEMATICS EDUCATION AND CURRICULUM CONSULTING EXPERIENCE**

UNESCO and Buenos Aires Province DoE (Argentina)	Training and Pedagogical Improvement in the Thematic Areas, La Plata, Argentina	April 1998
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American Diploma Project State of Indiana DoE	“Bridging the Gap” Symposium, Austin, USA Assessment Review Committee for End-of-Course High School Assessments, Indianapolis, USA	Jan. 2002 July-Aug. 2002
American Diploma Project State of Indiana DoE	Calibrating the Indiana School Standards, Indianapolis, USA Assessment Review Committee for End-of-Course HS Algebra I and II Assessment, Indianapolis, USA	Sep. 2002 Nov. 2002
American Diploma Project	“Making the HS Diploma Count,” Washington DC, USA	May-Sep. 2003
American Diploma Project	Vertical alignment of MAP and end-of-high-school benchmarks, Washington, DC, USA	Sep. 2003
State of Indiana DoE	Assessment Review Committee for End-of-Course HS Algebra I Assessment, Indianapolis, USA	April 2004
Emirate of Qatar State of Indiana DoE	Alignment analysis of science and mathematics standards Assessment Review Committee for End-of-Course HS Algebra II Assessment, Indianapolis, USA	June 2004 Nov. 2004
Achieve, Inc.	National Assessment Governing Board, Analysis of Frameworks in Mathematics for Grade 12, DC, USA	Feb. 2005
Achieve, Inc.	High School Mathematics Curriculum Development Panel, Austin, USA	Feb. 2005
Achieve, Inc.	National Assessment Governing Board, Concept Paper for Mathematics in Grade 12, Washington DC, USA	May 2005
Achieve, Inc.	High School Mathematics Curriculum Development Panel, Washington, DC, USA	Sep. 2005
State of Indiana DoE	Core-40 Update, Indianapolis, USA	Oct. 2005
State of Indiana DoE	Assessment Review Committee for End-of-Course Algebra Assessments, Indianapolis, USA	Nov. 2005
Achieve, Inc.	Algebra II End-of-Course Exam Development Workgroup, Washington, DC, USA	Jan. 2006
Achieve, Inc.	Benchmark of MI Mathematics High School Standards	March 2006
Achieve, Inc.	ADP Mathematics Backmapping Workgroup, Washington, DC, USA	March 2006
Achieve, Inc.	Benchmark of GA Mathematics High School Standards	April 2006
Achieve, Inc.	Benchmark of AK Mathematics High School Standards	April 2006
College Board & Achieve, Inc.	Benchmark of Mathematics High School Standards	April 2006
Achieve, Inc.	Benchmark of NJ Mathematics High School Standards	May 2006
Achieve, Inc.	Benchmark of OK Mathematics High School Standards	Aug. 2006
Achieve, Inc.	High School Mathematics Course Sequencing, Austin, TX, USA	Sep. 2006
Dana Center	High School Mathematics High Instructional Tasks, Austin, TX, USA	Sep. 2006
Achieve, Inc.	HS Integrated Mathematics Course Review,	Nov. 2006
I-STEM Resource Network,	Professional Development Initiative on Out-of-Field Middle School Mathematics Teachers	Jan.-Apr. 2007
NASH/Education Trust	Mathematics Success Project Atlanta, GA, USA	Feb. 2007
Achieve, Inc./Pearson	Algebra II End-of-Course Assessment Item Review Atlanta, GA, USA	Apr.-May 2007
Achieve, Inc.	Benchmark of AZ Mathematics High School Standards	July 2007
NASH/Education Trust	Impact of Remedial Work on Success Minneapolis, MN, USA	July 2007
Achieve, Inc./Pearson	Algebra II End-of-Course Item Review Philadelphia, PA, USA	Aug. 2007
Achieve, Inc./Pearson	Algebra II End-of-Course Rangefinding	Oct. 2007

Achieve, Inc. State of Indiana DoE	Benchmark of ID Mathematics High School Standards Review Committee for High School Mathematics Standards, Indianapolis, USA	Oct. 2007 Dec. 2007
Achieve, Inc. Achieve, Inc./Pearson	Benchmark of VA Mathematics High School Standards Algebra II End-of-Course Exam Data Review Washington, DC, USA	Dec. 2007 Jan. 2008
State of Indiana DoE	Review Committee for High School Mathematics Standards, Indianapolis, USA	Jan. 2008
Achieve, Inc. State of Indiana DoE	Benchmark of HI Mathematics High School Standards Review Committee for High School Mathematics Standards, Indianapolis, USA	Jan. 2008 Feb. 2008
NBPTS NBPTS	Mathematics Standards Committee Mathematics Standards Revision Meeting Washington, DC, USA	2008- May 2008
Achieve, Inc.	Planning ADP Standards Revision Washington, DC, USA	June 2008
NBPTS	Mathematics Standards Revision Meeting Washington, DC, USA	Aug. 2008
Achieve, Inc.	ADP Advisory Panel Meeting Washington, DC, USA	Sept. 2008
NBPTS	Mathematics Standards Revision Meeting Washington, DC, USA	Sept. 2008
Achieve, Inc. U. of Kentucky/Florida St. U. Achieve, Inc.	Benchmark of AL Mathematics High School Standards Advisory Board Meeting on HS Geometry ADP Standards Revision Meeting Washington, DC, USA	Jan. 2009 Feb. 2009 Mar. 2009
U. of Arizona Arizona At. University Achieve, Inc.	Mapping the Calculus Curriculum Workshop Precalculus Curriculum Reform Workshop ADP Pre-Standard Setting Meeting Washington, DC, USA	Apr. 2009 May 2009 July 2009
CCSSO	Mathematics Common Core Standards Advisory Board Washington, DC, USA	July 2009
U. of Kentucky/Florida St. U.	Advisory Board Meeting on HS Geometry Washington, DC, USA	Sep. 2009
CCSSO	Mathematics Common Core Standards Advisory Board Washington, DC, USA	Dec. 2009
Achieve, Inc.	Mathematics Pathways: HS Course Development Washington, DC, USA	Jan.-Feb. 2010
U. of Arizona	Mapping the Calculus Curriculum Workshop II	Mar. 2010

### CONFERENCE COMMITTEES

Member	Scientific Committee for the Year of concentration in "Mathematical Models of Combustion," Institute "Mauro Picone" Rome, Italy	1989
Member	Organizing Committee of the Special session on "Mathematics of the Living," XXIII National Congress Of Numerical Analysis, Royan, France	1991
Member	Coordination Committee for the "Thirty-Eighth International Mathematical Olympiad," Mar del Plata, Argentina	July 1997

Member	Evaluation Committee for the “Eighth International Congress of Biomathematics,” Panama City, Panama	Aug. 1997
Member	Programme Committee for the 1st International Congress “Deterministic and Stochastic Aspects of The Modeling of Biointeraction DESTOBIO ‘97,” Sofia, Bulgaria	Aug. 1997
Member	Jury for the “Olimpiada Rioplatense,” Mendoza, Argentina	Dec. 1997
Member	Organizing Committee for the special session on “Numerical Methods in Mathematical Population Dynamics,” V <sup>th</sup> International Conference on Mathematical Population Dynamics, Zakopane, Poland	June 1998
Member	Scientific Committee for the “Alacalá 1st International Conference on Mathematical Ecology,” Alacalá de Henares, Spain	Sept. 1998
Chair	Organizing Committee for the Second International Conference on “Deterministic and Stochastic Modeling of Biointeraction”, West Lafayette, Indiana	Aug. 2000
Member	Scientific Committee for the “Alacalá Second International Conference on Mathematical Ecology,” Alacalá de Henares, Spain	Sept. 2003
Member	Scientific Committee for the Third International Conference on “Deterministic and Stochastic Modeling of Biointeraction,” Trento, Italy	June 2004
Member	Steering Committee for the Second International Conference on “Computational and Mathematical Population Dynamics,” Campinas, Brazil	July 2007
Member	Organizing Committee for the Second International Conference on “Computational and Mathematical Population Dynamics,” Campinas, Brazil	July 2007
Member	Steering Committee for the Third International Conference on “Computational and Mathematical Population Dynamics,” Bordeaux, France	June 2010
Organizer	Special Session “Modern Developments in Mathematics of Infectious Diseases” at the Third International Conference on “Computational and Mathematical Population Dynamics,” Bordeaux, France	June 2010

## HONORS

Fulbright-Hays Grant, (to study at University of Chicago)	1976
Goethe Institute Grant, (to study in Göttingen)	1976
Fulbright Fellow	1977-79
Meyer Prize to best Master’s exam, University of Chicago	1979
College Fellow, University of Chicago	1979-80
Andrew Fellow, University of Chicago	1980-83
Prize to best paper of the congress, “Seventh International Congress on Biomathematics”	1996
Listed in Who’s Who in the World	2001-03
Fellow of the World Innovation Foundation	2001-
Listed in Who’s Who in Science and Engineering (6 <sup>th</sup> Edition)	2002
Listed in Who’s Who in America (56 <sup>th</sup> Edition)	2002
Listed in 2000 Outstanding Intellectuals of the 21 <sup>st</sup> Century (1 <sup>st</sup> Edition)	2002

Listed in Who's Who in America (60<sup>th</sup> Edition)

2006

**PROFESSIONAL SOCIETY MEMBERSHIPS**

American Mathematical Society (AMS)	1982-95
Society for Industrial and Applied Mathematics (SIAM)	1984-
Italian Mathematical Union	1988-91
Society for Mathematical Biology	1995-
Latin-American Association of Biomathematics (ALAB)	1996-2001
Society of Hispanic Professional Engineers (SHPE)	2000-03
Argentine Ecological Society	2001-06
Mathematical Association of America (MAA)	2001-
American Mathematical Society (AMS)	2002-03
Argentine Mathematical Union (UMA)	2004-
National Council of Teachers of Mathematics (NCTM)	2008-

**RESEARCH INTERESTS**

Applied Mathematics, Mathematical Biology, Mathematical Modeling, Mathematics and Science Education, Nonlinear Partial Differential Equations, Numerical Analysis.

**INVITED TALKS (one hour, unless otherwise noted)**

1. "Mixed Methods for Second Order Quasilinear Elliptic Problems" presented at the University of Illinois, Chicago, February 24, 1983.
2. "Mixed Finite Element Methods for Second Order Elliptic Problems," PEMA/INTEC (Special Program in Applied Mathematics/National Institute of Technology for Chemical Engineering), Santa Fe, Argentina, December 14, 1984.
3. Invited mini-course lecturer, PEMA/INTEC, Santa Fe, Argentina, August 5-14, 1985, short course on Mixed Finite Element Methods (20 hours).
4. "Mixed Finite Element Method for the Cahn-Hilliard Equation," University of Trento, Italy, January 14, 1987.
5. "Iterative Methods for Algebraic Linear Systems," University of Rome "La Sapienza," Italy, January 21, 1987.
6. "Numerical Methods for a Model of Population Dynamics," University of Trento, Italy, October 28, 1987.
7. "Numerical Methods for a Model of Population Dynamics," Institute for the Applications of Computer Science (IAC), Rome Italy, November 4, 1987.
8. "Numerical Methods for a Model of Population Dynamics," University of Pisa, Italy, November 6, 1987.
9. "Numerical Methods for a Model of Population Dynamics," Institute of Numerical Analysis (IAN), Pavia, Italy, November 10, 1987.
10. "Numerical Methods for Population Dynamics with Spatial Diffusion," University of Trento, Italy, March 29, 1988.

11. “Numerical Methods for Models of Population Dynamics.” Invited section lecturer and Section Chairman, International Conference on Numerical Methods and Applications, Bulgarian Academy of Science, Sofia Bulgaria, August 23, 1988 (30 minutes).
12. Colloquium “Mixed Finite Element Methods for 2<sup>nd</sup> Order Elliptic Problems: the p-Version,” University of Maryland Baltimore County, October 28, 1988.
13. “Mixed Finite Element Methods for 2<sup>nd</sup> Order Elliptic Problems: the p-Version,” University of Wyoming, Laramie, November 9, 1988.
14. “Mathematical Models of the Dynamics of a Population Structured by Age and Sex,” University of Rome “Tor Vergata,” Rome, Italy, May 16, 1989.
15. Invited lecturer and Section Chairman at *Equadiff VII*, Prague, Czechoslovakia, August 23, 1989 (30 minutes).
16. Invited section lecturer at the *Conference on Numerical Methods and Applications*, Bulgarian Academy of Sciences, Varna, Bulgaria, August 30, 1989 (30 minutes).
17. “Mixed Finite Element Methods for 2<sup>nd</sup> Order Elliptic Problems: the p-Version,” Bulgarian Academy of Science, Sofia, September 7, 1989.
18. Invited lecturer and Section Chairman at the Summer School on *Monte Carlo Methods and Parallel Algorithms*, Primorsko, Bulgaria, September 27, 1989 (30 minutes).
19. “Modeling of Population Dynamics with Age and Sex Structure,” University of Trento, Italy, November 23, 1989.
20. “Modeling of Epidemics of Diseases That Do Not Impart Immunity,” Institute of Numerical Analysis (IAN), Pavia, Italy, December 14, 1989.
21. Invited lecturer at the International Conference on Differential Equations and Applications to Biology and Population Dynamics, Claremont, CA, January 11, 1990 (30 minutes).
22. “A Mixed Finite Element Methods for Quasilinear Second Order Elliptic Problems: the p-Version,” presented at the University of Ghent, Belgium, April 18, 1990.
23. “Error Estimates for Mixed Finite Element Methods on Locally Refined Rectangular Grids,” presented at the University of Crete, Greece, May 30, 1990.
24. “Mixed Finite Element Methods,” presented at the University of Rome “La Sapienza,” Italy, June 6, 1990.
25. “Local Grid Refinement for the Mixed Finite Element Method,” presented at the University of Wyoming, Laramie, USA, October 23 and 25, 1990.
26. Invited Colloquium Speaker *Mathematical Modeling of Epidemics*, presented at the University of Wyoming, Laramie, USA, October 24, 1990.
27. Conference “Mathematical Modeling of Epidemics,” presented at the Dean’s Honors Seminar, Purdue University, West Lafayette, USA, February 25, 1991.

28. “Domain Decomposition in Large-Scale Computations of Flow in Porous Media,” presented at the Supercomputing Computer Research Institute (SCRI), University of Florida, Tallahassee, March 8, 1991.
29. “Workshop on Mathematical Modeling of Epidemics,” Erice, Italy, March 25, 1991.
30. Main Invited Speaker at the Semester “Numerical Analysis and Mathematical Modeling,” Banach International Mathematical Center, Warsaw, Poland, May 9, 1991.
31. Conference “Models for HIV Infection among Drug Users,” presented at the Banach Center, Warsaw, Poland, May 15, 1991.
32. Invited Speaker at the Congress on Numerical Analysis, Royan, France, May 29, 1991 (30 minutes).
33. Conference “Models of Population Dynamics with Oscillations,” presented at the National Institute for Research in Computing and Computer Science (INRIA), Rocquencourt, France, June 7, 1991.
34. Conference “Local Mesh Refinement and Domain Decomposition,” presented at the University of Pau, France, June 19, 1991.
35. Invited Colloquium Speaker “Mathematical Modeling of epidemics,” presented at the University of Kentucky, Lexington, KY, September 24, 1991.
36. Invited Speaker at the 3rd International Conference on Mathematical Population Dynamics, Pau, France, June 3, 1992 (30 minutes).
37. Invited Colloquium Speaker “Mathematical Modeling of Population Dynamics and Epidemics,” presented at the Wabash College, Crawfordsville, Indiana, USA, December 1993.
38. Invited Lecturer at International Conference on Differential Equations and Applications to Biology and Industry, Claremont, USA, June 1994 (30 minutes).
39. Invited Lecturer at the Special IMA Workshop “Designing A Course in Industrial Mathematics for Undergraduates,” IMA, Minneapolis, June 1994.
40. Invited Colloquium Speaker “Mixed Finite Element Methods for Nonlinear, Second Order Elliptic Problems,” presented at Hong Kong University of Science and Technology, August 1994.
41. Invited Colloquium Speaker “Mixed Finite Element Methods for Nonlinear, Second Order Elliptic Problems,” presented at the Academia Sinica, Beijing, China, August 1994.
42. Invited Colloquium Speaker “Mixed Finite Element Methods for Nonlinear, Second Order Elliptic Problems,” presented at Nankai University, Tianjin, China, August 1994.
43. Invited Lecturer at the ICMI-China Regional Conference on Mathematics Education, Shanghai, China, August 1994 (30 minutes).
44. Conference Mathematical Modeling of Epidemics, presented at the Dean’s Honors Seminar, Purdue University, West Lafayette, USA, September 1994.
45. Invited Colloquium Speaker Mathematical Models of Population Dynamics and Epidemics, Calvin College, Grand Rapids, USA, October 1994.

46. Invited Colloquium Speaker Mathematical Models of Population Dynamics and Epidemics, Hope College, Holland, USA, October 1994.
47. Conference Mathematical Models of Host-Parasite Systems in Marine Environment, University of Trento, Italy, November 1994.
48. Invited participant at the Workshop on Mathematical Models for Infectious Diseases, Oberwolfach, Germany, November-December 1994.
49. Invited Colloquium Speaker Mathematical Modeling of Epidemics, presented at IUPUI, Indianapolis, USA, March 1995.
50. Invited Speaker at the IVth International Conference on Mathematical Population Dynamics, Houston, USA, May 1995 (30 minutes).
51. Invited Speaker at the Annual Meeting of the Society for Mathematical Biology, Oaxtepec, Mexico, May 1995 (30 minutes).
52. Invited Speaker at the VIIth International Congress on Biomathematics, Buenos Aires, Argentina, October 1995 (30 minutes).
53. Invited Colloquium Speaker Mathematical Modeling of Epidemics and Host-Parasite Systems, presented at the University of Buenos Aires, Argentina, August 1996.
54. Conference A First-Second Order Splitting Finite Element Method for a Third Order Differential Equation, Nankai University, Tianjin, China, October 1996.
55. Conference A Two-Sex Model of Population Dynamics: Well-Posedness and Associated Problems, Jiaotong University, Xi'an, China, October 1996.
56. Conference Mixed Finite Element Methods for Strongly Nonlinear Second Order Elliptic Problems, Institute of Mathematics, Academia Sinica, Beijing, China, November 1996.
57. Conference Modeling Populations: from Rabbits to Humans, Tokyo University, Japan, November 1996.
58. Invited Colloquium Speaker A Host-Parasite System in Marine Environment, presented at the Wabash College, Crawfordsville, Indiana, USA, November 1996.
59. Invited Speaker at the Italo-Latinamerican Conference on Applied and Industrial Mathematics ITLA '97, Rome, Italy, January 1997.
60. Invited Colloquium Speaker Host-Parasite Systems, presented at Arizona State University, Tempe, USA, April 1997.
61. Invited Speaker in the Special Session on Epidemiological Models, International Conference on Mathematical Models in Medical and Health Sciences, Vanderbilt University, Nashville, Tennessee, USA, May, 1997 (30 minutes).
62. Invited Colloquium Speaker A Model of Schistosomiasis, presented at the University of Buenos Aires, Argentina, July 1997.



63. Invited Speaker in the Special Session on Numerical Methods for Age-Structured Population Models, DESTOBIO '97, Sofia, Bulgaria, August 1997.
64. Plenary Speaker and Session Chairman at the Congress Deterministic and Stochastic Aspects of the Modeling of Biointeraction, DESTOBIO '97, Sofia, Bulgaria, August 1997.
65. Invited Seminar Speaker A Model for Schistosomiasis, presented at the University of Bordeaux II, Bordeaux, France, March 1998.
66. Invited Speaker at the UNESCO International Meeting on Training and Pedagogical Improvement in the Thematic Areas, La Plata, Argentina, April 1998.
67. Plenary Speaker at the International Workshop on Spatially Heterogeneous Problems in Ecology and Epidemiology: Mathematical Models vs. Polluted Environment Data, Zakopane, Poland, June 1998 (30 minutes).
68. Plenary Speaker at the Congress Alacalá 1st International Conference on Mathematical Ecology, AICME '98, Alacalá de Henares, Spain, September 1998.
69. Invited participant at the IMA Workshop on Mathematical Approaches for Emerging and Reemerging Infectious Disease, Minneapolis, Minnesota, USA, May 1999.
70. Conference Modeling Population Growth, presented at the Dean's Freshman Honors Seminar, Purdue University, West Lafayette, USA, March 2000.
71. Invited Speaker at the 2000 SIAM Annual Meeting, Riomar, Puerto Rico, July 2000 (30 minutes).
72. Invited participant at the Workshop on Mixed Finite Element Methods and Applications, Oberwolfach, Germany, February 2001.
73. Conference *Mathematical Models in Demography*, presented at the Purdue Math Club, Purdue University, West Lafayette, USA, March 2001.
74. Invited Speaker at the Symposium on Host-Parasitoid Interactions in the 1<sup>st</sup> Binational Ecological Meeting (Argentina-Chile), Bariloche, Argentina, April 2001 (40 minutes).
75. Invited Seminar Speaker Models for Schistosomiasis, presented at the University of Trento, Italy, May 2001.
76. Conference *A Two-Strain Tuberculosis Model with an Age-Structure*, presented at the Institute of Numerical Analysis (IAN), Pavia, Italy, June 2001.
77. Course *Modeling Population Dynamics and Epidemics*, presented at the University of Palermo, Buenos Aires, Argentina, July 2001 (10 hours).
78. Invited participant at the McGraw-Hill ALEKS Workshop, Indianapolis, USA, November 2001.
79. Invited participant at the American Diploma Project: "Bridging the Gap" Symposium, Austin, USA, January 2002.
80. Invited participant at the McGraw-Hill Calculus Symposium, Key West, USA, February 2002.

81. Invited Speaker in the special session “Biological Applications of Dynamical Systems” at the AMS Central Section Meeting, Ann Arbor, USA, March 2002 (30 minutes).
82. Colloquium *Efficient Approximation of Population Density in Non-Autonomous and/or Nonlinear Models*, presented at the Department of Mathematics, University of Puerto Rico at Río Piedras, Puerto Rico, May 2002.
83. Colloquium *Efficient Approximation of Population Density in Non-Autonomous and/or Nonlinear Models*, presented at the Department of Mathematics, University of Puerto Rico at Mayagüez, Puerto Rico, May 2002.
84. Colloquium *Efficient Approximation of Population Density in Non-Autonomous and/or Nonlinear Models*, presented at the Department of Mathematics, University of Puerto Rico at Humacao, Puerto Rico, May 2002.
85. Symposium “Functional Differential Equations: Analytical and Numerical Methods for Applications,” at the VI Congress of SIMAI, Chia Laguna, Italy, May 2002 (30 minutes).
86. Seminar *Structured Population Models*, presented at the Center for Applied Scientific Computing (CASC), Lawrence Livermore National Laboratory, Livermore, USA, July 2002.
87. Panelist for the “American Diploma Project: Calibrating the Indiana School Standards, Indianapolis, USA, September 2002.
88. Seminar *Mathematics of Sex and Marriage* presented at the “Careers in Math” Seminar, Purdue University, West Lafayette, USA, September 2002.
89. Seminar *Mathematics of Sex and Marriage* presented at the Department of Mathematics, Wabash College, Crawfordsville, USA, October 2002.
90. Seminar *Mathematics of Sex and Marriage* presented at the VIGRE Seminar, Purdue University, West Lafayette, USA, November 2002.
91. Seminar *Mathematics of Sex and Marriage* presented at the Dean’s Freshman Honors Seminar, Purdue University, West Lafayette, USA, December 2002.
92. Invited Speaker at the “Segundo Encuentro Ítalo-Argentino de Matemática Pura y Aplicada,” Buenos Aires, Argentina, December 2002.
93. Panelist for the American Diploma Project: “Making The High School Diploma Count.” Washington, USA, June 2003.
94. Seminar *Mathematics of Sex and Marriage*, presented at the “Careers in Math” Seminar, Purdue University, West Lafayette, USA, October 2003.
95. Seminar *Mathematics of Sex, Marriage and Disease* presented at the Department of Mathematics, University of Puerto Rico, Mayagüez, Puerto Rico, March 2004.
96. Colloquium *La Matematica del Sexo y el Matrimonio*, presented at the Department of Mathematics, University of Puerto Rico at Mayagüez, Puerto Rico, March 2004.
97. Invited Speaker in the special session on “Continuous Distributed Parameters Models in Mathematical Biology” at the Sixth International Joint Meeting of the AMS and the Sociedad Matemática Mexicana, Houston, USA, May 2004 (30 minutes).

98. Invited Speaker at the “Conference on Computational and Mathematical Population Dynamics,” joint meeting of the 7th Conference on Mathematical Population Dynamics (MPD) and the 3rd Conference on Deterministic and Stochastic Models for Biological Interactions (DeStoBio), Trento, Italy, June 2004 (30 minutes).
99. Invited Speaker at the Fifth World Congress of Nonlinear Analysts (WCNA), Orlando, USA, July 2004.
100. Opening Keynote Speaker at the Com2Mac Workshop on Mathematical Biology and Numerical Analysis, Gyeongju, South Korea, August 2004.
101. Closing Keynote Speaker at the Com2Mac Workshop on Mathematical Biology and Numerical Analysis, Gyeongju, South Korea, August 2004.
102. Opening Keynote Speaker at the Applied Mathematics Forum, Gyeongju, South Korea, August 2004.
103. Seminar *Mathematics of Marriage*, presented at the Department of Mathematics, Universidad de Valladolid, Spain, January 2005.
104. Invited Speaker in the special session on “Mathematical Biology” at the Primer Congreso Conjunto de Matemáticas RSME-SCM-SEIO-SEMA, Valencia, Spain, February 2005 (30 min).
105. Invited Speaker in the special session on “Extinction, Periodicity, and Chaos in Population and Epidemic Models” at the AMS 2005 Spring Eastern Sectional, Lubbock, USA, April 2005 (30 minutes).
106. Seminar *What is missing in TB modeling?*, presented at the Department of Mathematics, Arizona State University, Tempe, USA, May 2005.
107. Invited Speaker at the Workshop on Modeling the Rapid Evolution of Infectious Diseases, London, Canada, May 2005.
108. Invited Speaker and Session Chairman at ECMTB 5, joint meeting of the European Society for Mathematical and Theoretical Biology and the Society for Mathematical Biology, Dresden, Germany, July 2005 (30 minutes).
109. Conference *Mathematical Modeling of Schistosomiasis*, presented at the Mathematical Biology Seminar, University of Utah, Salt Lake City, USA, October 2005.
110. Seminar *The mathematics of sex, marriage and disease*, presented at the “Bridge to Research,” Purdue University, West Lafayette, USA, February 2006.
111. Conference *Impact of Isolation in Demography and Sexually Transmitted Diseases*, presented at the Department of Mathematics, ITAM, Mexico City, Mexico, October 2006.
112. Conference *Impact of Isolation in Demography and Sexually Transmitted Diseases*, presented at the Department of Mathematics, Pontifical Catholic University of Chile, Valparaíso, Chile, October 2006.
113. Conference *Impact of Isolation in Demography and Sexually Transmitted Diseases*, presented at the Department of Mathematics, University of Costa Rica, San José, Costa Rica, October 2006.

114. Conference *Impact of Isolation in Demography and Sexually Transmitted Diseases*, presented at the Department of Mathematics, University of Puerto Rico, Humacao, Puerto Rico, October 2006.
115. Conference *Impact of Isolation in Demography and Sexually Transmitted Diseases*, presented at the Department of Mathematics, University of Puerto Rico, Río Piedras, Puerto Rico, October 2006.
116. *Mathematics in Marriage and Disease*, presented at the “Bridge to Research” Seminar, Purdue University, West Lafayette, USA, October 2006.
117. Invited lecturer and Session Chairman at MUA07, Mathematics Today for Man and the Environment, Montecatini Terme, Italy, March 2007 (30 min).
118. Conference *Does it matter what we teach in the classroom?* presented at the Annual Meeting of the Argentinian Mathematical Union (UMA), Cordoba, Argentina, September 2007.
119. Panelist in Forum *When in the classroom, do we teach mathematics the way we do mathematics?* Annual Meeting of the Argentinian Mathematical Union (UMA), Cordoba, Argentina, September 2007.
120. Invited Speaker at the Conference in Honor of Jim Cushing’s 65<sup>th</sup> Birthday, University of Arizona, Tucson, USA, October 2007 (30 min).
121. *Mathematical Modeling in Biology*, presented at the “Bridge to Research” Seminar, Purdue University, West Lafayette, USA, November 2007.
122. Conference *First Year Mathematics*, presented at the Department of Mathematics, Arizona State University, Tempe, USA, March 2008.
123. Colloquium *Logistic, two-sex, age structured population models*, presented at the Department of Mathematics, Arizona State University, Tempe, USA, March 2008.
124. Invited Speaker at the Special Session on “Some Mathematical Problems in Biology, from Macromolecules to Ecosystems,” at the AMS 2008 Spring Central Sectional, Bloomington, USA, April 2008 (30 minutes).
125. Invited Speaker at the Special Session on “Evolution Dynamics in Ecology and Epidemiology,” at the 7th AIMS International Conference on Dyn. Systems, Diff. Equations and Applications, Arlington, TX, USA, May 2008 (30 minutes).
126. Invited Speaker at the Minisymposium on “Mathematical Models for the Spread of Infectious Disease,” at the ECCOMAS 2008, Venice, Italy, July 2008 (30 minutes).
127. Invited Speaker at the Conference on Differential Equations and Applications in Ecology and Epidemiology, West Lafayette, IN, USA, December 2008 (30 minutes).
128. Plenary Speaker at the Workshop on Analysis and Numerics of Population Dynamics and Epidemics Models, Udine, Italy, December 2008.
129. Colloquium *A Data-Based Model for Tuberculosis: Who Should Be Vaccinating?*, presented at the Department of Mathematics, University of Florida, Gainesville, April 2009.
130. Invited Speaker at the Minisymposium on “Delay Differential Equation Models in Medicine” at

the SMB-CSMB Joint Conference 2009, Hangzhou, China, June 2009 (30 minutes).

131. Conference *Computational and Applied Mathematics at Arizona State University*, presented at the Department of Mathematics, Tsinghua University, Beijing, China, June 2009.
132. Conference *Computational and Applied Mathematics at Arizona State University*, presented at the Department of Mathematics, Nankai University, Tianjin, China, June 2009.
133. Invited Speaker at the Session on “Biomedical Applications: Patient-Specific Modelling and Simulation” at the 18<sup>th</sup> IMACS Congress MODSIM 09, Cairns, Australia, July 2009 (30 minutes).
134. Invited Speaker at the White Workshop on Mathematical Biology, University of Trento, Italy, December 2009 (30 minutes).
135. Seminar *A Data-Based Model for Tuberculosis: Who Should Be Vaccinating?*, presented at the School of Mathematical and Statistical Sciences, ASU, Tempe, January 2010.
136. Conference *The use of mathematical models in demography and in epidemiology*, presented at the ASU Mathematics Club, Arizona State University, Tempe, April 2010.

## CONTRIBUTED TALKS

1. Paper presented at the Finite Element Circus, Chicago, IL, October 1982.
2. Paper presented at the Finite Element Circus, Knoxville, TN, October 1983.
3. Paper presented at the Finite Element Circus, College Park, MD, November 1984.
4. Paper presented at the Finite Element Circus, Brookhaven National Laboratories, NY, November 1985.
5. Paper presented at the SIAM National Meeting, Boston, MA, July 1986.
6. Paper presented at the meeting The Impact of Mathematical Analysis on the Solution of Engineering Problems, University of Maryland, College Park, MD, September 1986.
7. Paper presented at the Finite Element Circus, Purdue University, West Lafayette, IN, April 1989.
8. “A Mixed Finite Element Method for a Model of Phase Separation: The Case of Near Constant Mobility,” Vth International Symposium on Numerical Methods in Engineering, Lausanne, Switzerland, September 1989.
9. “Error Estimates for Mixed Finite Element Methods on Locally Refined Rectangular Grids,” MAFELAP 7, London, United Kingdom, April 1990.
10. Paper presented at the SIAM Annual Meeting, Chicago, IL, July 1990.
11. Poster presented at the *IIIrd Project of Research on AIDS*, Orbetello, Italy, May 1991.
12. Paper presented at the *Finite Element Circus*, Newark, Delaware, November 1992.
13. Poster presented at the Conference *Partners for Prosperity*, Guadalajara, Mexico, April 1996.
14. “Development of Online Homework and a Multi-Media Package for Freshman Calculus,” Teaching and Learning with Technology Conference, Purdue University, West Lafayette, USA, March 2006.

**RECENT WORKSHOPS AND CONGRESSES ATTENDED**

- Promoting Diversity at the Graduate Level in Mathematics: a National Forum, MSRI, Berkeley, CA, October 2008.
- Joint Mathematics Meetings, Washington, DC, January 2009.
- Workshop Mapping the Calculus Curriculum, Tucson, AZ, April 2009
- Workshop on Precalculus Curriculum Reform, Tempe, AZ, May 2009
- Conference Mitigating the Spread of A/H1N1 Flu: Lessons Learned from Past Outbreaks, Tempe, AZ, June 2009.
- 24<sup>th</sup> IFIP TC7 Conference on System Modelling and Optimization, Buenos Aires, Argentina, July, 2009.
- Workshop on Finding and Keeping Graduate Students in the Mathematical Sciences, II, AIM, Palo Alto, CA, August 2009.
- Institutional Partners Meeting, MBI, Columbus, OH, October 2009.

**DEPARTMENTAL/SCHOOL SERVICE**

Elementary Services Committee	1990-95
Instructional Computing Committee	1992-95
Library Committee	1993-95
Graduate Committee	1994-99
Graduate Committee, Computational Science and Engineering	1994-2008
Calculus Committee	1995-97
Elementary Services Committee (Chair, 1998-2006)	1997-06
Applied Mathematics Committee	1997-2008
Ad-Hoc Committee for Elementary Service Courses, Chair	1997-98
Promotions Subcommittee	2000-01
Graduate Committee (Chair, 2006-)	2003-08
Promotions Subcommittee	2004-05
CCAM Director Search Committee	2004-05
Calculus Committee	2005-08
Promotions Subcommittee	2007-08
Mathematics Education Faculty Search Committee	2007-08
Graduate Committee	2008-09
School Transition Committee	2008-09
Calculus Reform Committee (Chair)	2009-10
School Self-Evaluation Committee (Chair)	2009-10

**COLLEGE SERVICE**

School of Science Grade Appeals Committee	1993-95
School of Science Faculty Council-At-Large	1993-96
School of Science Educational Policy Committee	1993-96
School of Science COALESCE Bioinformatics Committee	2003-04
College of Science COALESCE Scientific Computing Committee	2005-07
College of Science Graduate Educational Policy and Curriculum Committee	2006-08
College of Science Learning Pillar Planning Committee	2008

**UNIVERSITY SERVICE**

Academic Records Committee	1991-94
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Faculty Censure and Dismissal Procedures Committee	1992-94
University Senator At-Large	1994-96
University Advisory Committee for International Programs	1994-2002
Senate Steering Committee	1995-96
Ad-Hoc Committee for the Design of International Programs Building	1999-2001
School of Engineering Freshman Engineering Reform Committee	1999-2002
Promotions Committee, Panel X	2004-07
Faculty Censure and Dismissal Procedures Committee (Chair, 2006-)	2005-07
Design and Implementation of ALEKS ASU Math Placement Test	2008-10
Steering Committee on Learning Mathematics	2009-10
Working Group on B.A.E. in Mathematics Education Reform (Chair)	2009-10

## COURSE DESIGN

MATH 490M: Mathematics in Industrial Problems	1994
MATH 598A: Modeling Population Dynamics and Epidemics	1995
MATH 223B: Calculus for biology students. Paired with BIOL 131A	1995
MATH 152A: Mathematics in Liberal Arts	1998
MATH 159: Precalculus	2000
MAT 207: Algebra and Geometry in the High School	2010
MAT 208: Discrete Mathematics	2010

## EDITORIAL WORK

- Associate Editor for the Mathematics Journal of the Research Center in Pure and Applied Mathematics of the University of Costa Rica.
- Guest editor of *Mathematical Biosciences*' special issues for DESTOBIO, 1997-98.
- Guest Editor of *Mathematical Biosciences*' special issues for DESTOBIO 2000, 2001-02.
- Guest editor of *Mathematical Population Studies*' special issues for CMPD, 2004-06.
- Referee for: SIAM Journal of Numerical Analysis  
 Mathematical Biosciences  
 Journal of Mathematical Analysis and Applications  
 Numerical Methods for Partial Differential Equations  
 IMA Journal of Applied Mathematics  
 Mathematics of Computation  
 Mathematics and Computer Modeling  
 Journal of Computational and Applied Mathematics  
 Applied Mathematics Letter  
 Bulletin of Mathematical Biology  
 Journal of Mathematical Biology  
 Mathematica Aplicada e Computacional  
 Mathematical Biosciences and Engineering
- Guest editor of *Journal of Theoretical Biology*'s special issue for CMPD2, 2007-2009.
- Guest editor of *Mathematical Population Studies*' special issue for CMPD2, 2007-2009.

## GRANT PROPOSAL REVIEW WORK

- National Science Foundation (GRFP panel 2007, 2008, 2009; DMS Math Biology Panel 2010)
- Conseil National de Recherches Scientifiques (CNRS), the French National Science Foundation
- Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), the Argentine National Science Foundation
- Consiglio Nazionale delle Ricerche (CNR), the Italian National Science Foundation

**DOCTORAL STUDENTS ADVISED**

- Yonghoon Kwon, Ph.D. August 1986. Professor at Pohang Institute of Science and Technology, Korea.
- Mi-Young Kim, Ph.D. August 1993. Assistant Professor at Inha University, Incheon, Korea.
- Eun-Jae Park, Ph.D. August 1993. Professor at Yonsei University Seoul, Korea.
- Miyoung Lee, Ph.D. December 1995. Post-doctoral Fellow at Seoul National University, Seoul, Korea.
- Youngjoon Cha, Ph.D. August 1996. Associate Professor at Sejong University, Seoul, Korea.
- Quanzhu Duan, withdrew from Ph.D. program in 1997. Employed by Octel Corporation, Milpitas, CA.
- Curtis A. Patton, Ph.D. August 1998. Works for Epic Systems Corporation, Madison, WI.
- Maia Martcheva, Ph.D August 1998. Assistant Professor at University of Florida, Gainesville, FL.
- Guglielmo Rabbio, University of Rome, Laurea (Italy), 1990; Ph.D. August 1998. Employed by Chrysler Corporation, Auburn Hills, MI; deceased June 2004.
- Lih-Ing Wu (with Z. Feng), Ph.D. August 2000. Assistant Professor at Texas Tech University, TX.
- Cheng-che Li (with Z. Feng), Ph.D. December 2002. Assistant Professor at St. John's and St. Mary's Institute of Technology, Taipei, Taiwan.
- Mark Ward (with W. Szpankowski). Ph.D. May 2005. Assistant Professor at Purdue University, IN.
- Elisabetta Ferrando (with G. Harel), Ph.D. May 2005. Assistant Professor at University of Genova, Italy.
- Daniel Maxin. Ph.D. August 2007. Assistant Professor at Valparaiso University, IN.
- Ruijun Zhao. Ph.D. August 2008. Post-Doc in Computer Science at Purdue University, IN.
- Kai Yang. Ph.D. August 2008. Consultant at Terra Technology, Norwalk, CT.
- David Gerberry, Ph.D. August 2009. Post-Doc in Biomedical Modeling at UCLA, CA.
- Laurentiu Segal, Ph. D. expected August 2010.

**PEOPLE FAMILIAR WITH MILNER'S RESEARCH WORK**

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**PEOPLE FAMILIAR WITH MILNER'S MATHEMATICS EDUCATION WORK**

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Laura McGiffert Slover, Director, American Diploma Project, 400 1775 Eye Street NW., Suite 410, Washington,, D.C. 20007, (202) 419-1540, E-mail: [lslover@Achieve.org](mailto:lslover@Achieve.org)



Michael Roach, Director, Mathematics Assessment, Indiana Department of Education, State House, 151 W. Ohio St., Indianapolis, IN 46204, (317) 232-9185, E-mail: [mroach@doe.state.in.us](mailto:mroach@doe.state.in.us)

William McCallum, Director of the Institute for Mathematics and Education, Department of Mathematics, University of Arizona, 617 N. Santa Rita Ave, Tucson, Arizona, 85721-0089, E-mail: [wmc@math.arizona.edu](mailto:wmc@math.arizona.edu)

## GRANTS RECEIVED

PRF XL Summer Grant, 1984  
 NSF Grant Supplement, 1987  
 PRF International Travel Grant (Sofia, Bulgaria), 1988  
 NSF Grant Supplement, 1988  
 Italian National Research Council (CNR) Travel Grant (Sofia, Bulgaria), 1988  
 Italian National Research Council (CNR) Research Grant “Parallel Computing” (Rome), 1989-94  
 Italian Department of Health Research Grant “Mathematical Modeling of AIDS” (Rome), 1989-94  
 Italian National Research Council (CNR) Travel Grant (Czechoslovakia, Bulgaria and Switzerland), 1989  
 Italian Department of Health Travel Grant (Belgium and United Kingdom), 1990  
 Italian National Research Council (CNR) Travel and Study Grant (Göteborg, Sweden), 1990  
 PRF International Travel Grant (Warsaw, Poland), 1991  
 Italian National Research Council (CNR) Travel Grant (for Erice, Italy), 1991  
 PRF International Travel Grant (Pau, France), 1992  
 PRF Research Grant (for E.J. Park), 1992-93  
 PRF Research Grant (for Y. Cha), 1993-94  
 Lilly Faculty Open Fellowship, 1994-95  
 Purdue Global Initiative Faculty Grant from the Dean of International Programs for the “Development of A Course on the Mathematical Theory of Population Dynamics and Epidemics,” 1994  
 Purdue Global Initiative Faculty Grant from the Dean of International Programs for “Collaborative Research on Parasite-Host Systems in Marine Environment,” 1994  
 PRF International Travel Grant (Shanghai, China) 1994  
 Italian National Research Council (CNR) Research and Travel Grant “Binational Project,” (with M. Iannelli, Trento), 1994  
 PRF Research Grant (for C. Patton), 1995  
 Binational Research and Travel Grant (with M. Langlais, Bordeaux) from National Science Foundation (NSF) and Conseil National de Recherches Scientifiques (CNRS), Project entitled “Mathematical Modeling of Host-Parasite Systems in Marine Environment,” Apr. 1, 1995-Mar. 31, 1999.  
 Curriculum Development Grant from the School of Science, Purdue University, 1996  
 Binational Project Research and Travel Grant (with M. Iannelli, Trento) from the Italian National Research Council (CNR), 1997-2000  
 Research Grant (Co-PI with Z. Feng and D. Minchella) from the National Science Foundation (NSF), August 15, 1999 - July 31, 2002  
 PRF International Travel Grant (Bariloche, Argentina) 2001  
 Academic Reinvestment Program Grant (Jointly for the Graduate Committee of Computational Science and Engineering) from EVPAA for Computational Science and Engineering Educational Program, May 2001  
 Curriculum Development Grant from the School of Science, Purdue University, 2002  
 Research Grant (Co-PI with Z. Feng and D. Minchella) from the National Science Foundation (NSF), August 1, 2003 - July 31, 2007  
 Grant for Study in a Second Discipline from the Office of the Provost, Purdue University, 2004-05  
 PRF International Travel Grant (Dresden, Germany) 2005  
 Teaching and Learning Technology Digital Content Development Grant, Purdue University, 2005  
 Graduate Recruitment Overseas (GRO) Grant, Purdue University, 2006

SMB Grant to Support Student Travel to CMPD2, Campinas, Brazil, 2007  
 PRF International Travel Grant (Córdoba, Argentina) 2007  
 Winter 2008 Global Partners Grant (for Mexico) 2008  
 PRF Research Grant (for L. Segá), 2008-09  
 Bilsland Dissertation Grant (for D. Gerberry), 2008-2009  
 LCE College Algebra Redesign Grant, 2010  
 SMB Grant to Support Student Travel to CMPD3, Bordeaux, France, 2010

## GRANTS PENDING

NSF MSW21-RTG: Simulation, Modeling, and Analysis of Biomedical Problems in Mathematics.

## PUBLICATIONS

### Books

1. M. Iannelli, M. Martcheva, and F.A. Milner, Gender-Structured Population Modeling: Mathematical Methods, Numerics and Simulations, SIAM: Philadelphia, USA, April 2005.
2. M. Iannelli and F.A. Milner, Age-Structured Populations: An Introduction to the Mathematical Models and Methods, contract signed with Kluwer, Amsterdam, Netherlands,

### Refereed Journals

1. Milner, F.A. and Douglas, J., Jr., Numerical Methods for a Model of Cardiac Muscle Contraction. *Calcolo* 20; 129-141, 1983.
2. Milner, F.A., Mixed Finite Element Methods for Quasilinear Second-Order Elliptic Problems. *Math. Comp.* 44; 303-320, 1985.
3. Milner, F.A., A Primal Hybrid Finite Element Method for Quasilinear Second Order Elliptic Problems. *Numer. Math.* 47; 107-122, 1985.
4. Milner, F.A. and Douglas, J., Jr., Interior and Superconvergence Estimates for Mixed Methods for Second Order Elliptic Problems. *R.A.I.R.O, Math. Mod. and Num. Anal.* 19; 397-428, 1985.
5. Milner, F.A. and Kwon, Y., Some New  $L^\infty$ -Error Estimates for Mixed Finite Element Methods. *Mat. Apl. Comput.* 5(3); 249-264, 1986.
6. Milner, F.A. and Douglas, J., Jr., Numerical Methods for a Model of Population Dynamics. *Calcolo* 24; 247-254, 1987.
7. Milner, F.A. and Kwon, Y.,  $L^\infty$ -Error Estimates for Mixed Methods for Semilinear Second-Order Elliptic Equations. *SIAM J. Num. Anal.* 25; 46-53, 1988.
8. Milner, F.A., A Finite Element Method for a Two-Sex Model of Population Dynamics. *Numer. Meth. for Partial Diff. Eqs.* 4; 329-345, 1988.
9. Milner, F.A., Elliott, C. M. and French, D.R., A Second Order Splitting Method for the Cahn-Hilliard Equation. *Numer. Math.* 54; 575-590, 1989.

10. Milner, F.A.,  $L^\infty$ -Error Estimates for Linear Elasticity Problems. *J. Comp. Appl. Math.* 25; 305-313, 1989.
11. Milner, F.A. and Arbogast, T.J., A Finite Difference Method for a Two-Sex Model of Population Dynamics. *SIAM Num. Anal.* 26; 1474-1486, 1989.
12. Milner, F.A., A Numerical Method for a Model of Population Dynamics with Spatial Diffusion. *Comp. and Math. with Applic.* 19; 31-44, 1990.
13. Milner, F.A., A Mixed Finite Element Method for the Cahn-Hilliard and the Sivashinsky Equations. *Mat. Apl. Comput.* 9; 3-22, 1990.
14. Milner, F.A. and Kostova, T., Nonlinear Age-Dependent Population Dynamics with Constant Size. *SIAM J. Math. Anal.* 22; 129-137, 1991.
15. Milner, F.A., Iannelli, M., and Pugliese, A., Analytical and Numerical Results for the Age-Structured S-I-S Epidemic Model with Mixed Inter-Intracohort Transmission. *SIAM J. Math. Anal.* 23; 662-688, 1992.
16. Milner, F.A. and Rabbiolo, G., Rapidly Converging Numerical Algorithms for Models of Population Dynamics. *J. Math. Biol.* 30; 733-753, 1992.
17. Milner, F.A. and Suri, M., Mixed Finite Element Methods for Quasilinear Second Order Elliptic Problems: the  $p$ -Version. *R.A.I.R.O. M<sup>2</sup>AN* 26(7); 913-931, 1992.
18. Milner, F.A., Iannelli, M., Loro, R., Pugliese, A., and Rabbiolo, G., An AIDS Model with Distributed Incubation and Variable Infectivity: Applications to IV-Drug Users in Latium. *Europ. J. Epidem.* 8; 585-593, 1992.
19. Milner, F.A., Numerical Methods for a Model of Inhomogeneous Muscle Fibers. *Numer. Meths. for Partial Diff. Eqs.* 9; 51-62, 1993.
20. Milner, F.A., Age Structured Populations with History Dependent Mortality and Natality. *Calcolo* 30(1); 29-39, 1993.
21. Milner, F.A. and Langlais, M., Separable Solutions of an Age-Dependent Population Model with Age Dominance and Their Stability. *Math. Biosc.* 119; 115-125, 1994.
22. Milner, F.A. and Park, E.-J., A Mixed Finite Element Method for a Strongly Nonlinear Second Order Elliptic Problem. *Math. Comp.* 64; 973-988, 1995.
23. Milner, F.A. and Kim, M.Y., A Mathematical Model of Epidemics with Screening and Variable Infectivity. *Mathl. Comput. Modeling* 21; 29-42, 1995.
24. Milner, F.A. and Kostova, T., An Age-Structured Model of Populations Dynamics with Dominant Ages, Delayed Behavior, and Oscillations. *Math. Popul. Studies* 5; 1995.
25. Milner, F.A., Kim, M.Y., and Park, E.-J., Some Observations on Mixed Methods for Fully Nonlinear Parabolic Problems in Divergence Form. *Appl. Math. Lett.* 9; 75-81, 1996.
26. Milner, F.A., Iannelli, M., Loro, R., Pugliese, A., and Rabbiolo, G., Numerical Analysis of a Model for the Spread of HIV/AIDS. *SIAM J. Num. Anal.* 33; 864-882, 1996.

27. Milner, F.A. and Park, E.-J., Mixed Finite Element Methods for Hamilton-Bellman-Jacobi Type Equations. *IMA J. Num. Anal.* 16; 399-412, 1996.
28. Milner, F.A. and Lee, M., Mixed Finite Element Methods for Nonlinear Elliptic Problems: The  $p$ -version. *Num. Meth. for Partial Diff. Eqs.* 12; 729-741, 1996.
29. Milner, F.A., Gonzo, M., Iannelli, M., and Pugliese, A., The HIV/AIDS Epidemic Among Intravenous Drug Users: A Study of Contact Structure Through a Mathematical Model. *Math. Biosc.* 139; 25-58, 1997.
30. Milner, F.A. and Lee, M., Mixed Finite Element Methods for Nonlinear Elliptic Problems: The hp-version. *J. Comp. Appl. Math.* 85; 239-261, 1997.
31. Milner, F.A., Duan, Q. and Li, G. A First-Second Order Splitting for a Third-Order Partial Differential Equation. *Num. Math. for Partial Diff. Eqs.* 14; 89-96, 1998.
32. Milner, F.A., Cha, Y. and Iannelli, M., Existence and Uniqueness of Endemic States for the Age-Structured S-I-R Epidemic Model. *Math. Biosc.* 150; 177-190, 1998.
33. Milner, F.A. and Li, G., A Mixed Finite Element Method for a Third Order Partial Differential Equation. *Math. Apl. Comput.* 17; 377-384, 1998.
34. Milner, F.A. and Patton, C.A., A New Approach to Mathematical Modeling of Host-Parasite Systems. *Comp. and Math. with Applic.* 37; 93-110, 1999.
35. Milner, F.A. and Martcheva, M., Existence and Uniqueness of Classical Solutions of the Two-Sex Model of Population Dynamics. *Math. Pop. Studies* 7; 111-129, 1999.
36. Milner, F.A., Pugliese, A., Periodic Solutions: A robust numerical method for an S-I-R model of epidemics. *J. Math. Biol.* 39; 471-492, 1999.
37. Milner, F.A., Cha, Y. and Iannelli, M., Stability change of an epidemic model. *Dynamic Systems and Applic.* 9; 361-376, 2000.
38. Milner, F.A. and Martcheva, M., The Mathematics of Sex and Marriage Revisited. *Math. Pop. Studies* 9, 123-141, 2001.
39. Bernhard, R.J., Milner, F.A., and Rabbio, G., Vibrations of a beam and related statistical properties. *Math. and Comp. Mod.* 34, 657-675, 2001.
40. Milner, F.A. and Iannelli, M., On the Approximation of the Lotka-McKendrick Equation with Finite Life-Span. *Comp. Appl. Math.* 136, 245-254, 2001.
41. Milner, F. A. and Patton, C. A., Existence of solutions for a host-parasite model. *J. Comp. Appl. Math.* 137, 331-361, 2001.
42. Feng, Z., Iannelli, M., and Milner, F.A., A two-strain TB model with age of infection. *SIAM J. Appl. Math.* 62, 1634-1656, 2002.
43. Feng, Z., Li, C.-C., and Milner, F.A., Effects of density and age dependence on the transmission dynamics of schistosomes. *Math. Biosc.* 177-178, 271-286, 2002.
44. Langlais, M. and Milner, F.A., Existence and uniqueness of solutions for a diffusion model of host-parasite dynamics. *J. Math. Anal. Applic.* 279, 463-474, 2003.

45. Milner, F.A. and Patton, C.A., A diffusion model for host-parasite interaction, *J. Comp. Appl. Math.* 154, 273-302, 2003.
46. Bernhard, R.J., Milner F.A., and Rabbiolo, G., Definition of a high frequency threshold for plates and acoustical spaces. *J. Sound and Vibrat.* 277, 647-667, 2004.
47. Feng, Z, Curtis J., Eppert A., Milner, F.A., and Minchella D. J., Estimation of some parameters governing the transmission dynamics of schistosomes, *Appl. Math. Letters.* 17 (10), 1105-1112, 2004.
48. Li, C.-C., Feng, Z., and Milner, F.A., Schistosomiasis models with two migrating human groups, *Math. Comp. Model.* 41, 1213-1230, 2005.
49. Milner, F.A., *How may segregation from sexual activity affect population growth?*, *Math. Biosc. and Engin.* 2, 579-588, 2005.
50. Zhang, P., Feng, Z., and Milner, F.A., A schistosomiasis model with an age-structure in human hosts and its application to treatment strategies, *Math. Biosc.* 205, 83-107, 2007.
51. Angulo, O., López-Marcos, J.-C., and Milner, F.A., The application of an age-structured model with unbounded mortality to demography, *Math. Biosc.* 208, 495-520, 2007.
52. Maxin, D. and Milner, F.A., The effect of non-reproductive groups on persistent sexually transmitted diseases, *Math. Biosc. and Engin.* 4, 505-522, 2007.
53. Milner, F.A. and Zhao R., Analysis of an S-I-R model with directed spatial diffusion, *Math. Pop. Stud.* 15, 160-181, 2008.
54. Milner, F.A. and Zhao R., A Deterministic Model of Schistosomiasis with Spatial Structure, *Math. Biosc. and Engin.* 5, 505-522, 2008.
55. Milner, F.A. and Zhao, R., A mathematical model of *Schistosoma mansoni* in *Biomphalaria glabrata* with control strategies, *Bull. Math. Biol.* 70, 1886-1905, 2008.
56. Gerberry, D. and Milner, F.A., An SEIQR model for childhood diseases, *J. Math. Biol.* 59, 535-561, 2009.
57. Iannelli, M., Kostova, T., and Milner, F.A., A fourth-order method for numerical integration of age- and size-structured population models, *Numer. Meth. Part. Diff. Eq.* 25, 918-930, 2009.
58. Maxin, D. and Milner, F.A., The role of sexually abstained groups in two-sex demographic and epidemic logistic models with non-linear mortality, *J. Theor. Biol.* 258, 389-402, 2009.
60. Milner, F.A. and Yang, K., The Logistic, Two-Sex, Age-Structured Population Model, *J. Biol. Dynam.* 3, 252-270, 2009.
61. Angulo, O., López-Marcos, J.C., and López-Marcos, M.A. and Milner, F.A., A Numerical Method for Nonlinear Age-Structured Population Models with Finite Maximum Age, *J. Math. Anal. & Appl.* 361, 150-160, 2010.
62. Milner, F.A. and Zhao R., A New Mathematical Model of Syphilis, to appear in *Math. Model. Nat. Phenom.*

Refereed Conference Proceedings

1. Milner, F.A. and Kostova, T., Some Examples of Nonstationary Populations of Constant Size, *Differential Equations Models in Biology, Epidemiology and Ecology* (Claremont, CA, 1990), Lecture Notes in Biomathematics 92, Springer Verlag, 1991, 219-234.
2. Milner, F.A. and Kim, M. Y., Mathematical Models of Epidemics with Screening and Applications to HIV/AIDS, *Mathematical Population Dynamics: Analysis of Heterogeneity*, vol. 1, *Theory of Epidemics*, Proc. "Third International Conference on Mathematical Population Dynamics," (Pau, France, 1992), Wuerz Publishing Ltd., Winnipeg, Canada, 1995, pp. 279-294.
3. Milner, F.A., Langlais, M., and Busenberg, S., Non-unique Positive Steady States in Population Dynamics and Epidemics Models and their Stability, *Differential Equations and Applications to Biology and to Industry*, Proc. of June 1-4, 1994 Claremont International Conference dedicated to the memory of Stavros Busenberg (1941-1993), World Sci. Publishing, River Edge, NJ, 1996, pp. 369-383.
4. Milner, F.A., Cha, Y., and Iannelli, M., ¿Existen equilibrios endémicos múltiples, *Proc. "Seventh International Congress on Biomathematics,"* CNEA-CAC, Buenos Aires, Argentina, 1996, pp. 63-71.
5. Milner, F.A., Cha, Y. and Iannelli, M., Are Multiple Endemic Equilibria Possible?, *Advances in mathematical population dynamics---molecules, cells and man*, Proc. "Fourth International Conference on Mathematical Population Dynamics," (Houston, TX, 1995), *Series Math. Biol. Med.*, 6, World Sci. Publishing, River Edge, NJ, 1997, pp. 779-788.
6. Milner, F.A. and Feng, Z., A New Mathematical Model of Schistosomiasis, *Proc. International Conference on Mathematical Models in Medical and Health Sciences*, Vanderbilt University, May 1997.
7. Milner, F.A. and Segal, L. (2009), Integrating immunological and epidemiological models. In Anderssen, R.S., R.D. Braddock and L.T.H. Newham (Eds.), 18th World IMACS Congress and MODSIM09 International Congress on Modelling and Simulation. Modelling and Simulation Society of Australia and New Zealand and International Association for Mathematics and Computers in Simulation, July 2009, pp. 685-690.  
ISBN: 978-0-9758400-7-8. <http://www.mssanz.org.au/modsim09/B4/milner.pdf>

Non-Refereed Conference Proceedings and Other

1. Milner, F.A., Numerical Methods for Models of Population Dynamics, *Proc. Conf. "Numerical Methods and Applications," Bulgarian Academy of Sciences*, Sofia; 294-303, 1989.
2. Milner, F.A., The Cahn-Hilliard Equation of Phase Separation: The Case of Near Constant Mobility, Proc. "*Vth International Symposium on Numerical Methods in Engineering*," vol. 2, Springer Verlag; 117-122, 1989.
3. Milner, F.A., A Finite Element Method for a Model of Population Dynamics with Spatial Diffusion, "*Equadiff VII*," 7th Czechoslovak Conference on Differential Equations and Their Applications (held in Prague 1989), J. Kurzweil editor, BSB B.G. Teubner Verlag, Leipzig, 1990, 285-288.

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## TEACHING EXPERIENCE

- Geometry I*, **Spring 1978**, University of Buenos Aires, Argentina.
- High School Mathematics and Physics, **Spring 1978**, Buenos Aires, Argentina.
- Geometry I*, **Fall 1978**, University of Buenos Aires, Argentina.
- High School Mathematics and Physics, **Fall 1978**, Buenos Aires, Argentina.
- MAA 100, *Advanced Arithmetic*, **Fall 1979**, Central Y.M.C.A. Community College, Chicago; Barker-Rogers-Van Dyke, Arithmetic (2nd Edition), Saunders, 1979.
- MAA 100, *Arithmetic* (in Spanish), **Fall 1979**, Central Y.M.C.A. Community College, Chicago; Barker-Rogers-Van Dyke, Arithmetic (2nd Edition), Saunders, 1979.
- MAB 100, *Algebra* (in Spanish), **Fall 1979**, Central Y.M.C.A. Community College, Chicago.
- MAB 100 (2 sections), *Algebra*, **Spring 1980**, Central Y.M.C.A. Community College, Chicago.
- MTH 161, *Introduction to Finite Mathematics*, **Fall 1981**, Elmhurst College, Logan Square Center, Chicago; Keedy-Bittinger, Essential Mathematics (3rd Edition), Addison Wesley, 1980.
- MTH 162, *Mathematics for the Social Sciences*, **Fall 1981**, Elmhurst College, Little Village Hispanic Center, Chicago; Mizrahi-Sullivan, Mathematics for Business and Social Sciences: an Applied Approach Approach (2nd Edition), Wiley, 1979.
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- MTH 162, *Mathematics for the Social Sciences*, **Spring 1982**, Elmhurst College, Little Village Hispanic Center, Chicago; Mizrahi-Sullivan, Mathematics for Business and Social Sciences: an Applied Approach (2nd Edition), Wiley, 1979.
- MATH 102, *Fundamental Mathematics 2*, **Spring 1982**, University of Chicago, Chicago; Sentlowitz-Trevisone, College Algebra and Trigonometry, Addison Wesley, 1981.
- BMS 126 (2 sections), *Calculus with Applications to Business*, **Fall 1982**, De Paul University, Chicago; Hoffman-Orkin, Mathematics with Applications, McGraw-Hill, 1979.
- BMS 142, *Statistics I*, **Winter 1983**, De Paul University, Chicago; Sincich, Business Statistics by Example, Dellen, 1982.
- MAT 151, *Calculus II*, **Winter 1983**, De Paul University, Chicago; Gillett, Calculus and Analytic Geometry, Heath, 1981.
- BMS 125, *Algebra with Applications to Business*, **Spring 1983**, De Paul University, Chicago; Hoffman-Orkin, Mathematics with Applications, McGraw-Hill, 1979.
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- MA 221, *Calculus for Technology I*, **Fall 1983**, Purdue University, West Lafayette; Washington, Technical Calculus with Analytic Geometry (2nd Edition), Benjamin/Cummings, 1980.
- MA 362, *Topics in Advanced Calculus*, **Fall 1983**, Purdue University, West Lafayette; Hurley, Multivariate Calculus, Saunders, 1981.
- MATH 101, *Basic Math*, **Winter 1984**, Chicago State University, Chicago; Silver, Basic Mathematics.
- MATH 256, *Calculus III*, **Spring 1984**, Chicago State University, Chicago; Mizrahi-Sullivan, Calculus and Analytic Geometry, Wadsworth, 1982.
- MA 224, *Introductory Analysis II*, **Spring 1984**, Purdue University, West Lafayette; Auvil, Calculus with Applications, Addison-Wesley, 1982.
- MA 224 (2 sections), *Introductory Analysis II*, **Fall 1984**, Purdue University, West Lafayette; Auvil, Calculus with Applications, Addison-Wesley, 1982.
- MA 262 (2 sections), *Linear Algebra and Differential Equations*, **Spring 1985**, Purdue University, West Lafayette; Lipschutz, Linear Algebra, Schaum Outline Series, McGraw-Hill, 1968, and Boyce-DiPrima, Elementary Differential Equations and Boundary Value Problems (3rd Edition), Wiley, 1977.
- MA 511, *Linear Algebra with Applications*, **Summer 1985**, Purdue University, West Lafayette; Noble-Daniel, Applied Linear Algebra (2nd Edition), Prentice Hall, 1977.



- MA 523, *Introduction to Partial Differential Equations*, **Fall 1985**, Purdue University, West Lafayette; John, Introduction to Partial Differential Equations, Prentice Hall, 1982.
- MA 262, *Linear Algebra and Differential Equations*, **Fall 1985**, Purdue University, West Lafayette; Lipschutz, Linear Algebra, Schaum Outline Series, McGraw-Hill, 1968, and Boyce-DiPrima, Elementary Differential Equations and Boundary Value Problems (3rd Edition), Wiley, 1977.
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- MA 511, *Linear Algebra with Applications*, **Summer 1986**, Purdue University, West Lafayette; Noble-Daniel, Applied Linear Algebra (2nd Edition), Prentice Hall, 1977.
- MA 223, *Introductory Analysis I*, **Fall 1986**, Purdue University, West Lafayette; Auvil, Calculus with Applications, Addison-Wesley, 1982.
- MA 262, *Linear Algebra and Differential Equations*, **Fall 1986**, Purdue University, West Lafayette; Rabenstein, Elementary Differential Equations with Linear Algebra (3rd Edition), Academic Press, 1982.
- MA 523, *Introduction to Partial Differential Equations*, **Spring 1987**, Purdue University, West Lafayette; Zachmanoglou-Thoe, Introduction to Partial Differential Equations with Applications (2nd Edition), Dover, 1986.
- MA 262, *Linear Algebra and Differential Equations*, **Spring 1987**, Purdue University, West Lafayette; Rabenstein, Elementary Differential Equations with Linear Algebra (3rd Edition), Academic Press, 1982.
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- MA 224, *Introductory Analysis II*, **Fall 1987**, Purdue University, West Lafayette; Hoffman, Applied Calculus, McGraw-Hill, 1983.
- MA 262 (2 sections), *Linear Algebra and Differential Equations*, **Spring 1988** (half semester), Purdue University, West Lafayette; Rabenstein, Elementary Differential Equations with Linear Algebra (3rd Edition), Academic Press, 1982.
- Calcolo Numerico e Grafico*, **Spring 1988**, Ila Università di Roma, Rome, Italy;
- MA 262 (2 sections), *Linear Algebra and Differential Equations*, **Fall 1988**, Purdue University, West Lafayette; Rabenstein, Elementary Differential Equations with Linear Algebra (3rd Edition), Academic Press, 1982.
- MA 262 (2 sections), *Linear Algebra and Differential Equations*, **Spring 1989** (half semester), Purdue University, West Lafayette; Rabenstein, Elementary Differential Equations with Linear Algebra (3rd Edition), Academic Press, 1982.
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- MA 523, *Introduction to Partial Differential Equations*, **Summer 1989**, Purdue University, West Lafayette; Zachmanoglou-Thoe, Introduction to Partial Differential Equations with Applications (2nd Edition), Dover, 1986.
- Calcolo Numerico e Grafico*, **Spring 1990**, Ila Università di Roma, Rome, Italy.
- Istituzioni di Matematica per Biologia*, **Spring 1990**, Ila Università di Roma, Rome, Italy.
- MA 262, *Linear Algebra and Differential Equations*, **Summer 1990**, Purdue University, West Lafayette; Rabenstein, Elementary Differential Equations with Linear Algebra (3rd Edition), Academic Press, 1982.
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- MA 611, *Methods of Applied Mathematics I*, **Spring 1991**, Purdue University, West Lafayette; Groetsch, Elements of Applicable Functional Analysis, Decker, 1980.
- MA 262, *Linear Algebra and Differential Equations*, **Spring 1991**, Purdue University, West Lafayette; Rabenstein, Elementary Differential Equations with Linear Algebra (3rd Edition), Academic Press, 1982.
- MA 173, *Calculus and Analytic Geometry I*, **Fall 1991**, Purdue University, West Lafayette; Thomas-Finney, Calculus with Analytic Geometry (7th Edition), Addison Wesley, 1988.
- MA 301, *Topics in Elementary Analysis*, **Fall 1991**, Purdue University, West Lafayette; Price, Notes for MA 301. Mathematics Education course for HS teachers.

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- MA 490M, *Mathematics in Industrial Problems*, **Spring 1994**, Purdue University, West Lafayette; Friedman-Littman, Industrial Mathematics for Undergraduates (preliminary edition), SIAM, 1993.
- MA 223B, *Introductory Analysis I*, **Spring 1995**, Purdue University, West Lafayette; Hoffman, Applied Calculus, McGraw-Hill, 1983.
- MA 161, *Plane Analytic Geometry and Calculus I*, **Fall 1995**, Purdue University, West Lafayette; Ellis and Gullick, Calculus with Analytic Geometry (5th Edition).
- MA 261, *Multivariate Calculus*, **Fall 1995**, Purdue University, West Lafayette; Ellis and Gullick, Calculus with Analytic Geometry (5th Edition).
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- MA 490T, *Algebra for High School Teachers*, **Fall 1999**, Purdue University, West Lafayette. *In-Service course on methods.*
- MA 511, *Linear Algebra with Applications*, **Fall 1999**, Purdue University, West Lafayette; Strang, Linear Algebra and Its Applications (Third Edition), Harcourt Brace Jovanovich, 1988.
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- MA 161E, *Plane Analytic Geometry and Calculus I*, **Fall 2000**, Purdue University, West Lafayette; Stewart, Calculus, Early Transcendentals (4th Edition).
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- MA 161E, *Plane Analytic Geometry and Calculus I*, **Spring 2001**, Purdue University, West Lafayette; Stewart, Calculus, Early Transcendentals (4th Edition).
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- MA 161E, *Plane Analytic Geometry and Calculus I*, **Spring 2002**, Purdue University, West Lafayette; Stewart, Calculus, Early Transcendentals (4th Edition).
- MA 511, *Linear Algebra with Applications*, **Fall 2002**, Purdue University, West Lafayette; Strang, Linear Algebra and Its Applications (Third Edition), Harcourt Brace Jovanovich, 1988.
- MA 511Q, *Linear Algebra with Applications*, **Fall 2002**, Continuing Engineering Education television course, Purdue University, West Lafayette; Strang, Linear Algebra and Its Applications (Third Edition), Harcourt Brace Jovanovich, 1988.
- MAT 610, *Numerical Analysis and Partial Differential Equations*, **Spring 2003**, University of Trento, Povo, Italy; John, Partial Differential Equations (Fourth Edition), Springer, 1982.
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- MA 351, *Elementary Linear Algebra*, **Fall 2003**, Purdue University, West Lafayette; Penney, Linear Algebra, Ideas and Applications, Wiley, 1998.
- MATE 4061, *Numerical Analysis I*, **Spring 2004**, University of Puerto Rico, Mayagüez; Burden and Faires, Numerical Analysis (Seventh Edition), Brooks/Cole, 2001.
- MATE 6672, *Numerical Analysis II*, **Spring 2004**, University of Puerto Rico, Mayagüez; Isaacson and Keller, Analysis of Numerical Methods, Dover, 1994.
- MA 161, *Plane Analytic Geometry and Calculus I*, **Fall 2005**, Purdue University, West Lafayette; Stewart, Calculus, Early Transcendentals (5th Edition).
- MA 490F, *Mathematics in Epidemiology and Immunology*, **Fall 2005**, Purdue University, West Lafayette; Brauer and Castillo-Chávez, Mathematical Models in Population Biology and Epidemiology, Springer, 2001.
- CS 501, *Introduction to Computational Science*, **Fall 2005**, Purdue University, West Lafayette; Burden and Faires, Numerical Analysis (Seventh Edition), Brooks/Cole, 2001.
- MA 511, *Linear Algebra with Applications*, **Spring 2006**, Purdue University, West Lafayette; Strang, Linear Algebra and Its Applications (Fourth Edition), Harcourt Brace Jovanovich, 2006.
- MA 511Q, *Linear Algebra with Applications*, **Spring 2006**, Engineering Professional Education television course, Purdue University, West Lafayette; Strang, Linear Algebra and Its Applications (Fourth Edition), Harcourt Brace Jovanovich, 2006.
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- MA 161, *Plane Analytic Geometry and Calculus I*, **Fall 2007**, Purdue University, West Lafayette; Stewart, Calculus, Early Transcendentals (6th Edition).
- MAT 275, *Modern Differential Equations*, **Fall 2009**, Arizona State University, Tempe; Edwards and Penney, *Differential Equations: Computing and Modeling*, (4th Edition, 2008).
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