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BACKGROUND

Education

Ph.D. in Mathematics, University of California, Los Angeles, 2005
M.A. in Mathematics, University of California, Los Angeles, 1999
B.S. in Mathematics, University of Michigan, 1997

Experience

Associate Professor, Department of Mathematics, University of Central Florida, 2014 – Present
Assistant Professor, Department of Mathematics, University of Central Florida, 2008 – 2014
Postdoctoral Fellow, Mathematical Biosciences Institute, The Ohio State University, 2005 – 2008

Related positions

Visitor, Institute for Pure and Applied Mathematics, University of California, Los Angeles, Summer 2009

Research interests

Mathematics (dynamical systems)
Ecology (species interactions, disease spread, optimal strategies)

Dissertation title

Mathematical models of plant competition for sunlight

Dissertation co-advisors

Paul H. Roberts (mathematics) and Richard R. Vance (biology)

Postdoctoral co-advisors

Yuan Lou (mathematics), Thomas Waite (biology), and Avner Friedman (mathematics)

Research summary

I use mathematical approaches to address problems that arise in biology. My work has centered on three main areas of theoretical ecology: species interactions (plant competition for sunlight, predator-prey switching, interactions at multiple spatial scales, structured resources, resource theft), the spatial spread of epidemics (rabies, dengue, and others), and the evolution of optimal choice (state-based decision-making in foraging gray jays, the honeybee nest-site selection process, and animal-mediated seed dispersal).

REFEREED ARTICLES

Published

1. RR Vance and AL Nevai. Plant population growth and competition in a light gradient: a mathematical model of canopy partitioning. *J. Theor. Biol.* 245 (2007) 210–219.

2. AL Nevai and RR Vance. Plant interspecies competition for sunlight: a mathematical model of canopy partitioning. *J. Math. Biol.* 55 (2007) 105–145.
3. TA Waite, AL Nevai, and KM Passino. State subsidies induce gray jays to accept greater danger: an ecologically rational response? *Behav. Ecol. Sociobiol.* 61 (2007) 1261–1266.
4. AL Nevai, TA Waite, and KM Passino. State-dependent choice and ecological rationality. *J. Theor. Biol.* 247 (2007) 471–479.
5. LJS Allen, BM Bolker, Y Lou, and AL Nevai. Asymptotic profile of the steady states for an SIS epidemic patch model. *SIAM J. Appl. Math.* 67 (2007) 1283–1309 (also MBI Technical Report No. 58).
6. LJS Allen, BM Bolker, Y Lou, and AL Nevai. Asymptotic profile of the steady states for an SIS epidemic reaction-diffusion model. *Discr. Cont. Dyn. Sys. A.* 21 (2008) 1–20 (also MBI Technical Report No. 60).
7. AL Nevai and RR Vance. The role of leaf height in plant competition for sunlight: analysis of a canopy partitioning model. *Math. Biosci. Eng.* 5 (2008) 101–124.
8. W Just and AL Nevai. A Kolmogorov-type competition model with multiple coexistence states and its applications to plant competition for sunlight. *J. Math. Anal. Appl.* 348 (2008) 620–636 (also MBI Technical Report No. 59).
9. LJS Allen, Y Lou, and AL Nevai. Spatial patterns in a discrete-time SIS patch model. *J. Math. Biol.* 58 (2009) 339–375 (also MBI Technical Report No. 71).
10. W Just and AL Nevai. A Kolmogorov-type competition model with finitely supported allocation profiles and its applications to plant competition for sunlight. *J. Biol. Dyn.* 3 (2009) 599–619 (also MBI Technical Report No. 70).
11. AL Nevai, KM Passino, and P Srinivasan. Stability of choice in the honey bee nest-site selection process. *J. Theor. Biol.* 263 (2010) 93–107 (also MBI Technical Report No. 79).
12. V Guttal, F Bartumeus, G Hartvigsen, and AL Nevai. Retention time variability as a mechanism for animal mediated long distance dispersal. *PLoS ONE.* 6 (2011) e28447 (29 pages).
13. AL Nevai. Extinction. In S. J. Greenwald and J. E. Thomley (Eds). *Encyclopedia of Mathematics and Society.* Salem Press. Pasadena, CA. 2012.
14. AL Nevai and RA Van Gorder. Effect of resource subsidies on predator-prey population dynamics: a mathematical model. *J. Biol. Dyn.* 6 (2012) 891–922.
15. AL Nevai and E Soewono. A model for the spatial transmission of dengue with daily movement between villages and a city. *Math. Med. Biol.* 31 (2014) 150–178.
16. C Cosner and AL Nevai. Spatial population dynamics in a producer-scrounger model. *Discr. Cont. Dyn. Sys. B.* (2015) 1591–1607.

Other Publications

- F. Spatial models for rabies and other epidemic diseases. MBI Highlight. 2006. <http://mbi.osu.edu/aboutmbi/broaderimpact.html>.

FELLOWSHIPS AND GRANTS

Simons Foundation Collaboration Grant, Mathematical Problems in Spatial Ecology, 2013 – 2018

In-House Research Grant, UCF, Orlando, FL, 2009 – 2010

MBI Postdoctoral Fellowship, Ohio State, Columbus, OH, 2005 – 2008

NIH Systems and Integrative Biology Training Grant, UCLA Biomathematics, Los Angeles, CA, 2001 – 2004

Research Mentorship Fellowship, UCLA, Los Angeles, CA, 2001

HONORS AND AWARDS

Teaching awards

Burnett Honors College, Honors Interdisciplinary Seminar (proposal accepted), UCF, Autumn 2010

Collegium of University Teaching Fellows, UCLA, 2004

Summer Teaching Assistantships, UCLA, Los Angeles, CA, 1998, 1999, and 2000

Travel awards

AMS Travel Award to attend ⁴ below, Aug 2006
UCLA Graduate Division Student Travel Award to attend ³ below, Jan 2005
SIAM Student Travel Award to attend ² below, Jul 2004
UCLA Graduate Division Student Travel Award to attend ¹ below, Aug 2003

PRESENTATIONS

Invited talks and presentations

2016

AIMS Conf. on Dyn. Sys. and Diff. Eqns., Special Session on Mathematical Ecology, Orlando, FL, Jul 2016

2015

Mathematical Modeling and Analysis of Populations in Biol. Systems, London, ON, Canada, Oct 2015

2014

Differential Equations and Applications Seminar, University of Central Florida, Orlando, FL, Oct 2014

SIAM Conf. on Appl. of Dyn. Sys., Minisymposium on Mathematical Epidemiology, Charlotte, NC, Aug 2014

SIAM Conf. on Appl. of Dyn. Sys., Minisymposium on Mathematical Ecology, Charlotte, NC, Aug 2014

2013

Math Colloquium, University of Central Florida, Orlando, FL, Aug 2013

2012

Everything Disperses to Miami, Special Session on the Evolution of Dispersal, Miami, FL, Dec 2012

Math Colloquium, Florida State, Tallahassee, FL, Nov 2012

AIMS Conf. on Dyn. Sys. and Diff. Eqns., Special Session on Dispersal, Orlando, FL, Jul 2012

AIMS Conf. on Dyn. Sys. and Diff. Eqns., Special Session on Mathematical Biology, Orlando, FL, Jul 2012

AMS Joint Mathematics Meeting, Special Session on Mathematical Biology, Boston, MA, Jan 2012

2011

Math Colloquium, The College of William and Mary, Williamsburg, VA, Oct 2011

Mathematical Modeling and Analysis of Populations in Biol. Systems, San Antonio, TX, Oct 2011

AMS Autumn Southeastern Section Meeting, Special Session on Math. Biology, Wake Forest, NC, Sep 2011

Graduate Student Seminar, University of Central Florida, Orlando, FL, Sep 2011

ICIAM 2011 Minisymposium on Modeling of Ecological Systems, Vancouver, BC, Canada, Jul 2011

SIAM Conf. on Appl. of Dyn. Sys., Minisymposium on Immunology and Medicine, Snowbird, UT, May 2011

Math Colloquium, University of Central Florida, Orlando, FL, Mar 2011

AMS Joint Mathematics Meeting, Special Session on Mathematical Biology, New Orleans, LA, Jan 2011

2010

2010 NCTS Workshop on PDE Models of Biological Process, Taipei, Taiwan, Dec 2010

AMS Joint Mathematics Meeting, Special Session on Mathematical Biology, San Francisco, CA, Jan 2010

2009

AMS Autumn Southeastern Section Meeting, Special Session on Math. Ecology, Boca Raton, FL, Oct 2009

Mathematical Modeling and Analysis of Populations in Biol. Systems, UA Huntsville, Huntsville, AL, Oct 2009

Math Biology Seminar, Renyi Institute, Hungarian Academy of Sciences, Budapest, Hungary, Jun 2009
Workshop: Stochastic Population Dynamics and Applications in Spatial Ecology, Edinburgh, UK, Jun 2009
Mathematics Graduate Seminar, University of Central Florida, Orlando, FL, Apr 2009

2008

Interdisciplinary Seminar, University of Central Florida, Orlando, FL, Oct 2008
Math Biology Seminar, University of Florida, Gainesville, FL, Oct 2008
Biology Colloquium, University of Central Florida, Orlando, FL, Sep 2008
World Congress of Nonlinear Analysts, Special Session on Mathematical Biology, Orlando, FL, Jul 2008
Workshop: Dynamics of Structured Populations, Banff Intl. Research Station, Alberta, Canada, Apr 2008
Math Colloquium, University of Rhode Island, Kingston, RI, Mar 2008
Math Colloquium, City University of New York, College of Staten Island, Staten Island, NY, Feb 2008
Math Colloquium, The Ohio State University, Columbus, OH, Feb 2008
Math Colloquium, University of Louisiana, Lafayette, LA, Feb 2008
Math Colloquium, University of Montana, Missoula, MT, Feb 2008
Math Colloquium, California State University, San Jose, CA, Feb 2008
Math Colloquium, University of Maryland, Baltimore, MD, Jan 2008
Math Colloquium, Texas Tech University, Lubbock, TX, Jan 2008
Math Colloquium, University of Central Florida, Orlando, FL, Jan 2008
AMS Joint Mathematics Meeting, Special Session on Mathematical Ecology, San Diego, CA, Jan 2008

2007

Math Colloquium, University of California, Irvine, CA, Dec 2007
MBI Institute Partners Meeting, Ohio State, Columbus, OH, Oct 2007
Mathematical Models in Evolution and Ecology, Sussex, UK, Sep 2007
MBI Workshop for Young Researchers in Mathematical Biology, Ohio State, Columbus, OH, Sep 2007
Society for Mathematical Biology, Annual Meeting, San Jose, CA, Aug 2007
Math Biology Colloquium, Texas Tech University, Lubbock, TX, Apr 2007
Math Biology Colloquium, California State University, Los Angeles, CA, Feb 2007
Math Colloquium, California State University, Chico, CA, Feb 2007
Math Colloquium, University of Iowa, Iowa City, IA, Feb 2007
Math Colloquium, California State University, Long Beach, CA, Jan 2007
Math Colloquium, Michigan State University, East Lansing, MI, Jan 2007
AMS Joint Mathematics Meeting, New Orleans, LA, Jan 2007

2006

MBI Seminar, Ohio State, Columbus, OH, Dec 2006
MBI Institute Partners Meeting, Ohio State, Columbus, OH, Nov 2006
QBI Seminar, Ohio University, Athens, OH, Sep 2006
⁴International Congress of Mathematicians, Madrid, Spain, Aug 2006
MBI Workshop on Spatial Ecology, Ohio State, Mar 2006

2005

AMS Autumn Central Section Meeting, Special Session on Mathematical Ecology, Lincoln, NE, Oct 2005
MBI Institute Partners Meeting, Ohio State, Columbus, OH, Nov 2005
MBI Postdoctoral Seminar, Ohio State, Columbus, OH, Oct 2005
Math Colloquium, Gettysburg College, Gettysburg, PA, Feb 2005
Math Colloquium, California State University, Humboldt, Arcata, CA, Jan 2005
³Workshop on Spatial Ecology, University of Miami, Miami, FL, Jan 2005

2004

²SIAM Conference on the Life Sciences, Portland, OR, Jul 2004
AMS Joint Mathematics Meeting, Phoenix, AZ, Jan 2004

2003

Research Frontiers in Biomathematics, UCLA, Los Angeles, CA, Nov 2003
¹Ecological Society of America, Annual Meeting, Savannah, GA, Aug 2003

Invited poster presentations

Mathematical Modeling and Analysis of Populations in Biol. Systems, London, ON, Canada, Oct 2015
Ecological Society of America, Annual Meeting, Pittsburgh, PA, Aug 2010
Mathematical Modeling and Analysis of Populations in Biological Systems, Arizona, Tucson, AZ, Oct 2007
IPAM Workshop on Swarming by Nature and by Design, UCLA, Los Angeles, CA, Feb 2006
Eighth Annual Biology Research Symposium, UCLA, Los Angeles, CA, May 2005
Joint SoCAMS and SIAM Spring Southern California Section Meeting, Los Angeles, CA, Apr 2005
MBI Workshop for Young Researchers in Mathematical Biology, Ohio State, Columbus, OH, Mar 2005

Other talks and presentations

Math Biology Seminar, University of Central Florida, Orlando, FL, Autumn 2015 (4 talks)
Math Biology Seminar, University of Central Florida, Orlando, FL, Spring 2015 (4 talks)
Math Biology Seminar, University of Central Florida, Orlando, FL, Autumn 2014 (2 talks)
Math Biology Seminar, University of Central Florida, Orlando, FL, Spring 2014 (7 talks)
Math Biology Seminar, University of Central Florida, Orlando, FL, Autumn 2013 (2 talks)
Math Biology Seminar, University of Central Florida, Orlando, FL, Spring 2013 (5 talks)
Math Biology Seminar, University of Central Florida, Orlando, FL, Autumn 2012 (6 talks)
Math Biology Seminar, University of Central Florida, Orlando, FL, Oct 2009
Math Biology Seminar, University of Central Florida, Orlando, FL, Feb 2009
Math Biology Seminar, University of Central Florida, Orlando, FL, Oct 2008

RESEARCH MENTORING

Ph.D. committees (* committee chair)

*Jeff Sharpe, Mathematics, Graduate Student, UCF, Orlando, FL, 2012 – Present
Robert Van Gorder, Mathematics, Graduate Student, UCF, Orlando, FL, 2009 – 2014

Masters degree committees

Joshua Castro, Biology, Graduate Student, UCF, Orlando, FL, 2012 – 2015
Evan Foley, Mathematics, Graduate Student, UCF, Orlando, FL, 2015
Taslina Rehman, Mathematics, Graduate Student, UCF, Orlando, FL, 2012 – 2013
Matthew Tye, Biology, Graduate Student, UCF, Orlando, FL, 2012 – 2014
Joseph Wilda, Mathematics, Graduate Student, UCF, Orlando, FL, 2015

Honors thesis committees

Evan Husk, Engineering, Undergraduate Student, UCF, Orlando, FL, 2009 – 2012

Other mentoring experience

Shannon Dickson, Mathematics, Graduate Student, UCF, Orlando, FL, 2012 – 2014
Vishwesh Guttal, Physics, Graduate Student, Ohio State, Columbus, OH, 2006 – 2008
Jessica Hearn, Mathematics and Biology, Graduate Student, UCF, Orlando, FL, 2010 – Present

Kristina Kraakmo, Mathematics, Graduate Student, UCF, Orlando, FL, 2011
Stephanie Melzer, Mathematics, Graduate Student, UCF, Orlando, FL, 2009 – 2010
Taymaskhan Musaev, Excel, Undergraduate Student, UCF, Orlando, FL, Spring 2014
Nathan Nicodemus, Excel, Undergraduate Student, UCF, Orlando, FL, Spring 2014
James Pestrak, Mathematics, Graduate Student, UCF, Orlando, FL, 2010
VIGRE working group in mathematical biology, Topic Leader, Ohio State, Columbus, OH, 2006
MBI Summer Program in Ecology and Evolution, Project Leader, Ohio State, Columbus, OH, 2006
Collegium of University Teaching Fellows, Honors Seminar, Instructor, UCLA, Los Angeles, CA, Winter 2004

TEACHING

Teaching interests

Mathematical modeling, mathematical biology, calculus, modern algebra, differential equations, numerical analysis, mathematical programming, history of mathematics, and philosophy of mathematics

Teaching experience

Mathematics, Instructor, UCF, Orlando, FL, Autumn 2008 – Present
Mathematics, Calculus Project Leader, Ohio State, Columbus, OH, Winter 2008
Mathematics, Calculus Project Leader, Ohio State, Columbus, OH, Winter 2007
VIGRE working group in mathematical biology, Instructor, Ohio State, Columbus, OH, Autumn 2006
Mathematics, Instructor, University of Judaism, Bel-Air, CA, Autumn 2004 and Spring 2005
Collegium of University Teaching Fellows, Honors Seminar, Instructor, UCLA, Los Angeles, CA, Winter 2004
Biology, Teaching Assistant, UCLA, Los Angeles, CA, Winter 2003 and Autumn 2003
Biomathematics, Teaching Assistant, UCLA, Los Angeles, CA, Autumn 2002
Computing, Instructor and Teaching Assistant, UCLA, Los Angeles, CA, Winter 2000 – Summer 2001
Mathematics, Instructor and Teaching Assistant, UCLA, Los Angeles, CA, Autumn 1997 – Spring 2001

Teaching workshops attended

Faculty Center for Teaching and Learning, UCF, Orlando, FL, Autumn 2008
MAA Spring Southern California Section Meeting, San Diego, CA, Mar 2004
Collegium of University Teaching Fellows, Office of Instr. Development, UCLA, Los Angeles, CA, Autumn 2003
MAA Fall Southern California Section Meeting, Pomona, CA, Oct 2003
Teaching Assistant Training Conference, Office of Instr. Development, UCLA, Los Angeles, CA, Sep 2003
The WRITe Project, Office of Instructional Development, UCLA, Los Angeles, CA, Jan 2003
Teaching and Technology, Department of Mathematics, UCLA, Los Angeles, CA, Spring 2000
Teaching Assistant Training Program, Department of Mathematics, UCLA, Los Angeles, CA, Autumn 1997
Teaching Assistant Training Conference, Office of Instr. Development, UCLA, Los Angeles, CA, Sep 1997

PROFESSIONAL ACTIVITIES

Conferences organized

AIMS Conf. on Dyn. Sys. and Diff. Eqns., Special Session on Mathematical Biology, Orlando, FL, Jul 2016
SIAM SE Atlantic Section Conference, Special Session on Mathematical Biology, Huntsville, AL, Mar 2015
SIAM SE Atlantic Section Conference, Special Session on Mathematical Biology, Melbourne, FL, Mar 2014
AIMS Conf. on Dyn. Sys. and Diff. Eqns., Special Session on Mathematical Biology, Orlando, FL, Jul 2012
AMS Joint Mathematics Meeting, Special Session on Mathematical Biology, Boston, MA, Jan 2012
MBI Workshop for Young Researchers in Mathematical Biology, Ohio State, Columbus, OH, Sep 2008
MBI Workshop for Young Researchers in Mathematical Biology, Ohio State, Columbus, OH, Sep 2007

MBI Workshop for Young Researchers in Mathematical Biology, Ohio State, Columbus, OH, Mar 2007
MBI Workshop for Young Researchers in Mathematical Biology, Ohio State, Columbus, OH, Mar 2006

Chair of contributed paper sessions

SIAM Conference on the Life Sciences, Charlotte, NC, Aug 2014
Mathematical Models in Evolution and Ecology, Sussex, UK, Sep 2007
SIAM Conference on the Life Sciences, Portland, OR, Jul 2004
AMS Joint Mathematics Meeting, Phoenix, AZ, Jan 2004

Journal referee

App. Math. Letters (1 review), Am. Nat. (1), BioSystems (1), Bound. Value Prob. (1), Bull. Math. Biol. (1), Conserv. Biol. (1), Disc. Cont. Dyn. Sys. Series B (2), Estuaries (1), J. Biol. Sys. (1), J. Difference Eq. Appl. (1), J. Ecology (1), J. Insect Behav. (1), J. Math. Biol. (1), J. Math. Anal. Appl. (1), J. Theor. Biol. (2), Math. Biosci. Engin. (3), Math. Med. Biol. (1), Math. Reviews (3), Nat. Res. Mod. (1), Nonlin. Anal. Ser. A (1), NOVA (1), PLOS Comp. Biology (1), Royal Soc. Edin. Proc. A (1), SIAM J. Appl. Math. (1), SIAM J. Math. Anal. (1), Theor. Ecol. (3), UCF Undergrad. Res. J. (1)

Book referee

Wiley (1 review)

Other professional activities

Dept. Calculus Committee, Representative, UCF, Orlando, FL, Autumn 2015 – Present
Dept. Associate Professor Promotion and Tenure Committee, Chair, UCF, Orlando, FL, 2015
Dept. Assistant Professor Cumulative Progress Evaluation Committee, Chair, UCF, Orlando, FL, Spring 2015
Dept. Computers and Technology Committee, Chair, UCF, Orlando, FL, Autumn 2014 – Present
Dept. Undergraduate Textbook Committee, Representative, UCF, Orlando, FL, Spring 2014
Dept. Undergraduate Curriculum Committee, Representative, UCF, Orlando, FL, Autumn 2012 – Summer 2014
NSF Panel Reviewer. Arlington, VA. March 20××
Graduate Appeals Committee, Representative, UCF, Orlando, FL, Autumn 2011 – Summer 2012
Faculty Senate, Representative, UCF, Orlando, FL, Autumn 2011 – Spring 2012
Institutional Animal Care and Use Committee, Voting Member, UCF, Orlando, FL, Autumn 2009 – Present
Dept. Calculus Textbook Committee, Representative, UCF, Orlando, FL, Autumn 2009 – Winter 2010
Dept. Website and Newsletter Committee, Representative, UCF, Orlando, FL, Spring 2009 – Summer 2014
Mathematical Biology Seminar, Co-organizer, UCF, Orlando, FL, Autumn 2008 – Present
EXCEL Undergraduate Research Experience Program, Faculty Mentor, UCF, Orlando, FL, Autumn 2008 – Present
Dept. Library Committee, Representative, UCF, Orlando, FL, Autumn 2008 – Spring 2012
MBI Postdoctoral Seminar, Organizer, Ohio State, Columbus, OH, Autumn 2006
Math and Physical Sciences Council, Member and Office Holder, UCLA, Los Angeles, CA, 1998 – 2002
Mathematics and Science Scholars Program, Director and Coordinator, UCLA, Los Angeles, CA, Summer 2002
Graduate Student Outreach, Member and Vice-President, UCLA, Los Angeles, CA, 1997 – 1999
Research Service Advisory Board, Member, UCLA, Los Angeles, CA, Sep 1997 – Jun 1998
Undergraduate Mathematics Society, Member and Co-President, Michigan, Ann Arbor, MI, Sep 1993 – May 1997
Math and Science Scholars Program, Counselor, Michigan, Ann Arbor, MI, Summer 1997

Professional societies

European Society for Mathematical and Theoretical Biology

CURRICULUM DESIGN

Proposals accepted

MATHEMATICAL BIOLOGY

Mathematics Major and Minor Concentrations

Mathematics, University of Central Florida, Orlando, FL, Autumn 2010

COVER-UPS, CONTROVERSIES, AND CONFLICTS IN MATHEMATICS

Honors Interdisciplinary Seminar

Burnett Honors College, University of Central Florida, Orlando, FL, Autumn 2010

COURSES TAUGHT

Instructor

Department of Mathematics, University of Central Florida, Orlando, FL

16 Semesters

Designed curriculum, wrote syllabus, assigned textbooks, determined readings, conducted lectures, assigned and graded homework, designed and graded quizzes and exams, held regular office hours, and assigned final grades for these courses:

MAC 1105	COLLEGE ALGEBRA	Sum 14 (Global) and Spr 16 (Global)
MAC 1140	PRECALCULUS ALGEBRA	Aut 15 (Global)
MAC 1140H	HONORS PRECALCULUS ALGEBRA	Aut 08 and Spr 09
MAC 2311	CALCULUS I	Aut 09, Aut 11, and Sum 13
MAC 2311H	HONORS CALCULUS I	Aut 15
MAC 2312	CALCULUS II	Spr 10, Spr 12, Sum 15, (Global), and Spr 16
MAC 2312H	HONORS CALCULUS II	Spr 13 and Spr 14
MAC 2313	CALCULUS III	Aut 10
MAP 2302	DIFFERENTIAL EQUATIONS	Spr 09, Aut 09, Aut 10, Aut 13, and Aut 14
MAP 4103	MATHEMATICAL MODELING	Spr 15
MAP 4484	MATHEMATICAL BIOLOGY I	Aut 13 and Aut 15
MAP 5336	DIFFERENTIAL EQUATIONS	Spr 12 (Tegrity)
MAP 6938	SPECIAL TOPICS IN MATH. BIOLOGY	Spr 10
MAS 3105	MATRIX AND LINEAR ALGEBRA	Aut 12 and Spr 14 (Tegrity)
MAT 1033	INTERMEDIATE ALGEBRA	Aut 14 (Global) and Spr 15 (Global)
MGF 1107	EXPLORATIONS IN MATHEMATICS	Sum 15 (Global)
MHF 3302	LOGIC AND PROOF	Aut 11, Spr 13 (Tegrity), and Sum 13

COLLEGE ALGEBRA (MAC 1105), Summer 2014 (Global) and Spring 2016 (Global) – One section meeting four hours each week for 12 weeks. One section meeting three hours each week for 15 weeks.

PRECALCULUS ALGEBRA (MAC 1140), Autumn 2015 (Global) – One section meeting three hours each week for 15 weeks.

HONORS PRECALCULUS ALGEBRA (MAC 1140H), Autumn 2008 and Spring 2009 – Three honors sections meeting three hours each week for 15 weeks.

CALCULUS I (MAC 2311), Autumn 2009, Autumn 2011, and Summer 2013 – Two sections meeting four hours each week for 15 weeks; one large lecture meeting four hours each week for 12 weeks.

HONORS CALCULUS I (MAC 2311H), Autumn 2015 – One honors section meeting four hours each week for 15 weeks.

CALCULUS II (MAC 2312), Spring 2010, Spring 2012, Summer 2015, (Global), and Spring 2016 – Three sections meeting four hours each week for 15 weeks; one section meeting five hours each week for 12 weeks.

HONORS CALCULUS II (MAC 2312H), Spring 2013 and Spring 2014 – One honors section meeting four hours each week for 15 weeks.

CALCULUS III (MAC 2313), Autumn 2010 – One section meeting four hours each week for 15 weeks.

DIFFERENTIAL EQUATIONS (MAP 2302), Spring 2009, Autumn 2009, Autumn 2010, Autumn 2013, and Autumn 2014 – Five sections meeting three hours each week for 15 weeks.

MATHEMATICAL MODELING (MAP 4103), Spring 2015 – One section meeting three hours each week for 15 weeks. Course coordinator.

MATHEMATICAL BIOLOGY I (MAP 4484), Autumn 2013 and Autumn 2015 – Two sections meeting three hours each week for 15 weeks.

DIFFERENTIAL EQUATIONS (MAP 5336), Spring 2012 (Tegrity) – One graduate section meeting three hours each week for 15 weeks.

SPECIAL TOPICS IN MATHEMATICAL BIOLOGY (MAP 6938), Spring 2010 – One graduate section meeting three hours each week for 15 weeks.

MATRIX AND LINEAR ALGEBRA (MAS 3105), Autumn 2012 and Spring 2014 (Tegrity) – Two sections meeting four hours each week for 15 weeks.

INTERMEDIATE ALGEBRA (MAT 1033), Autumn 2014 (Global) and Spring 2015 (Global) – Two sections meeting three hours each week for 15 weeks.

EXPLORATIONS IN MATHEMATICS (MGF 1107), Summer 2015 (Global) – One section meeting four hours each week for 12 weeks.

LOGIC AND PROOF (MHF 3302), Autumn 2011, Spring 2013 (Tegrity), and Summer 2013 – Two sections meeting three hours each week for 15 weeks; one section meeting four hours each week for 12 weeks.

Department of Mathematics, The Ohio State University, Columbus, OH

1 Quarter

VIGRE WORKING GROUP IN MATHEMATICAL BIOLOGY, Autumn 2006 – One of several MBI postdocs to design curriculum, determine readings, conduct discussions, mentor students on research projects, and assign final grades.

Department of Mathematics, University of Judaism, Bel-Air, CA

2 Semesters

Designed curriculum, wrote syllabus, assigned textbooks, determined readings, conducted bi-weekly lectures, assigned and graded homework, designed and graded quizzes and exams, held regular office hours, and assigned final grades in each of the following courses:

MATHEMATICAL METHODS, Spring 2005 – Class of 10 students meeting three hours each week for 15 weeks.

MATHEMATICAL PREPARATION, Autumn 2004 – Class of 10 students meeting three hours each week for 15 weeks.

Collegium of University Teaching Fellows, University of California, Los Angeles, CA

1 Quarter

COVER-UPS, CONTROVERSIES, AND CONFLICTS IN MATHEMATICS, Winter 2004 – Freshman and sophomore honors seminar. Designed curriculum, wrote syllabus, assigned textbooks, determined readings, conducted discussions, assigned and graded student papers written in stages (thesis statement, annotated bibliography, outline, working draft, and final draft), designed and maintained course web site, held regular office hours, and assigned final grades.

Department of Mathematics, University of California, Los Angeles, CA

3 Quarters

Designed curriculum, wrote syllabus, planned and conducted lectures, gave lectures in computer lab, assisted students with software, designed and maintained course web site, designed homework assignments, held weekly meetings with homework readers, held regular office hours, and assigned final grades for each of the following courses:

SOFTWARE TOOLS FOR INFORMATION MANAGEMENT, Summer 2001 – Presented lectures using PowerPoint; first offering through the Academic Advancement Program, exclusive to students with disadvantaged backgrounds; class of 40 students, meeting two hours each week for 6 weeks.

SOFTWARE TOOLS FOR INFORMATION MANAGEMENT, Winter 2000 and Spring 2000 – Two classes of 25 students each, meeting one hour each week for 10 weeks.

Teaching Assistant / Associate / Fellow

Department of Biology, University of California, Los Angeles, CA

2 Quarters

PLANT PHYSIOLOGICAL ECOLOGY, Autumn 2003 – Designed, photocopied, proctored, and graded all quizzes and exams; assisted students with homework; designed and maintained course web site; and held regular office hours.

MATHEMATICAL ECOLOGY LABORATORY, Winter 2003 – Designed curriculum, wrote syllabus, planned and conducted lectures, gave lectures in computer lab, assisted students with software, designed and maintained course web site, designed lab homework assignments, formulated lecture homework problems, graded homework, and held regular office hours.

Department of Biomathematics, University of California, Los Angeles, CA

1 Quarter

BIostatistics, Autumn 2002 – Assisted students with questions from lecture and homework, held regular office hours, proctored and graded exams, and graded homework.

Department of Mathematics, University of California, Los Angeles, CA

12 Quarters

Planned and conducted discussion sections, summarized lecture material, worked through sample problems or programs, answered questions from lecture and homework, held regular office hours, conducted exam review sessions, and proctored and graded exams for each of the following courses:

INTRODUCTION TO PROGRAMMING, Summer 2000, Autumn 2000, Winter 2001, and Spring 2001 – Designed and maintained discussion web site, assisted students with programming software, held some discussions in UCLA Botanical Garden, and helped professor to design exams.

HISTORY OF MATHEMATICS, Autumn 1999 – Graded homework and helped professor to design exams.

APPLIED NUMERICAL METHODS, Summer 1999 – Graded homework and helped professor to design exams.

CALCULUS OF SEVERAL VARIABLES, Winter 1999, Spring 1999, and Autumn 1999 – Tutored in Student Math Center.

PRECALCULUS, Winter 1999 – Proctored weekly quizzes.

CALCULUS AND ANALYTIC GEOMETRY, Autumn 1998 and Winter 1999 – Wrote and distributed complete solutions to homework problems, proctored quizzes, and tutored in Student Math Center.

INTRODUCTION TO COMPUTERS AND COMPUTING, Winter 1998 and Spring 1998 – Discussion sections held in computer lab.

CALCULUS FOR LIFE SCIENCE STUDENTS, Autumn 1997 and Spring 1998 – Wrote and distributed complete solutions to homework problems and tutored in Student Math Center.

FINITE MATHEMATICS, Autumn 1997, Autumn 1998, and Spring 1999 – Wrote and distributed complete solutions to homework problems.