UNIVERSITY OF MIAMI
Abbreviated Curriculum Vita
ROBERT STEPHEN CANTRELL

HIGHER EDUCATION

University of Utah, Mathematics......Ph.D., 1981.

Furman University, Mathematics, summa cum laude......B.S., 1976

EXPERIENCE

<table>
<thead>
<tr>
<th>University of Miami</th>
<th>Professor</th>
<th>1992-</th>
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<tr>
<td>University of Miami</td>
<td>Director ITME</td>
<td>2007-</td>
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<tr>
<td>(Institute for Theoretical and Mathematical Ecology)</td>
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<tr>
<td>University of Miami</td>
<td>Associate Professor</td>
<td>1987-1992</td>
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<tr>
<td>University of Miami</td>
<td>Assistant Professor</td>
<td>1982-1987</td>
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<tr>
<td>Southwest Texas State University</td>
<td>Assistant Professor</td>
<td>1981-1982</td>
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PUBLICATIONS

Books published:


Juried journal articles:

(All co-authorships are considered equal in mathematics and are listed alphabetically unless otherwise specified.)

2. The implications of model formulation when transitioning from spatial to landscape ecology (with Chris Cosner and William F. Fagan), Mathematical Biosciences and Engineering 9(2012), 27-60.


5. Evolution of dispersal and the ideal free distribution (with Chris Cosner and Yuan Lou), Mathematical Biosciences and Engineering 7(2010), 17-36.


8. Interspecific variation in critical patch size and gap-crossing ability as determinants of geographical range-size distributions (with Chris Cosner, William F. Fagan and Subramanian Ramakrishnan), The American Naturalist 173 (2009), 363-375. (Faculty of 1000 Listed)


12. Movement toward better environments and the evolution of rapid diffusion (with Chris Cosner and Yuan Lou), Mathematical Biosciences 204 (2006), 199-214.


17. Multiple reversals of competitive dominance in ecological reserves via external habitat degradation (with Chris Cosner and Yuan Lou), Journal of Dynamics and Differential Equations, 16 (2004), 973-1010.


19. Intraspecific interference and consumer-resource dynamics (with Chris Cosner and Shigui Ruan), Discrete and Continuous Dynamical Systems 4B (2004), 527-546.


34. Practical persistence in diffusive food chain models (with Chris Cosner), Natural Resource Modeling 11 (1998), pp. 21-34.


47. On solutions to coupled multiparameter nonlinear Sturm-Liouville boundary value problems whose state components have a specified nodal structure, Resultate der Mathematik 22 (1992), pp.470-488.


54. Global preservation of nodal structure in coupled systems of nonlinear Sturm-Liouville


Other works, publications and abstracts:

1. Permanence in periodic-parabolic ecological systems with spatial heterogeneity (with Eric Avila), in World Scientific Series in Applicable Analysis 4 (Dynamical Systems and


3. Effects of aggregative movement on population dynamics and critical patch size (with Chris Cosner), submitted.


5. Fitness-dependent dispersal versus random dispersal (with Chris Cosner, Yuan Lou, and Chao Xie), submitted.


**PROFESSIONAL**

**Funded Research Performed**

National Science Foundation Summer Research Grant

National Science Foundation Summer Research Grant

National Science Foundation Summer Research Grant

National Science Foundation Summer Research Grant

National Science Foundation Grant
#INT9805564 for participant cost support for
Nonlinear Differential Equations: A Meeting in Honor of Professor Alan Lazer on the Occasion of His 60th Birthday August 1998- May 1999, Robert Stephen Cantrell and Chris Cosner, Co-principal investigators, $10,000 (plus $5,000 matching fundings from College of Arts and Sciences, University of Miami).

National Science Foundation Summer Research Grant

National Science Foundation Initiative on Biocomplexity Grant
OCE01-19916, (2001-2006), Senior Scientist, UM Total $742,106.

National Science Foundation Summer Research
Grant # DMS02-11367 (2002-2005), Robert Stephen Cantrell and Chris Cosner, Co-principal investigators, $213,000.

National Science Foundation Summer Research
Grant # DMS02-11367 (2002-2005) Robert Stephen Cantrell and Chris Cosner, Co-principal investigators, Supplementary funding to conduct an REU, $56,970. Total funding for grant, $269,970.

National Institutes of Health Grant 1-P20-RR020770-01, Exploratory Centers for Interdisciplinary Research; (2004-2007) Senior Scientist; John Beier, PI. Total Award $1,605,302.

National Science Foundation Summer Research

National Science Foundation Summer Research

National Institute of General Medical Studies (NIH) Grant # 1R01GM093345-01 (2010-2014), Senior Scientist; John Beier, PI, $2,039,559.

Major Editorial responsibilities:

Associate Editor for Mathematical Biosciences and Engineering


TEACHING

Teaching Specialization: Differential Equations, Nonlinear Analysis, Mathematical Biology.

(Courses taught)
Mathematics 230
Mathematics 359
Mathematics 513
Mathematics 515
Mathematics 533
Mathematics 534
Mathematics 630
Mathematics 631
Mathematics 680 (Functional Analysis)
Mathematics 681 (Functional Analysis)
Mathematics 686 (Distribution Theory)
Mathematics 687 (Distribution Theory)
Mathematics 681 (Nonlinear Analysis)
Mathematics 681 (Mathematical Modeling in Ecology)

(Course developed)
Mathematics 359

Thesis and Dissertation Advising/Post-doctoral student supervision (chairman or committee member; topic; student name; date):

Committee member, M.A., Linda McIntyre, April 1983.
Committee member, M.A., Raimondo Del Castillo, December 1983.
Committee member, Ph.D., Carlos Alvarez, September 1985.
Committee member, M.A., Antonio Ansoleaga, December 1986.
Committee member, Ph.D., Fethi Belgacem, 1995.
Committee member, Ph.D., Chen Chang, 1995.
Chairman, Ph.D., Eric Avila, 1995.
(Ph.D. awarded July 1995; thesis topic: “Permanence in seasonal ecological models with spatial heterogeneity”
Committee Member, Ph.D., Felix Garcia, 1996.
Committee Member, Ph.D., Brian Coburn, 2009
Committee Member, Ph.D., Patricia Katri, 2010
Postdoctoral Supervisor, Juan Gutierrez, 2009-2010
Chairman, Ph.D., Daniel Ryan, July 2011; thesis topic: “Fitness dependent Dispersal in intra-guild predation communities”
Committee Member, Ph.D. Douglas Scheib, on-going

SERVICE

Colloquium Committee, 1982-1983 (Departmental)
New Program Committee, 1983-1984 (Departmental)
Graduate Committee, 1985-1986 (Departmental)
Graduate Council Subcommittee on Graduate Faculty, 1984-1986, Chairman, 1985-1986.
Secretary, Phi Beta Kappa, 1987-1989.
Vice President, Phi Beta Kappa, 1989-1990.
Departmental Chair Search Committee, 1989-1990.
Colloquium Committee, Chairperson, 1988-1994 (Departmental).

University Review Committee for Rhodes, Fulbright, and Truman Scholarships, 1988-present.
Faculty Senate Committee on Academic Standards, 1991-1997.
Faculty Senate AdHoc Committee to Establish Excellence in Teaching Award, 1991.
Faculty Senate AdHoc Committee on Undergraduate Admissions, 1992-1993.
Faculty Senate Committee on Academic Standards, Co-Chair, 1992-1993.
Faculty Senate Committee on Academic Standards, Vice Chair, 1993-1994
Faculty Senate Committee on Academic Standards, Subcommittee on Retention, 1994-1995.
Faculty Senate Committee on Academic Standards, Chair, 1995-1997.
College of Arts and Sciences College Council, 1996-1999.
College of Arts and Sciences Consultative Committee for Selection of Dean, 1996-1997.
Faculty Senate Budget and Compensation Committee, 1999 - 2003.
Faculty Senate Budget and Compensation Committee, Chair, 2001 – 2003.
Faculty Senate Academic Standards Committee, 2003 – 2006.
Faculty Senate Tenure Review Board, 2003-present.
Faculty Senate Academic Standards Committee, Chair, 2004-2006.
Faculty Senate, 2004-present
College of Arts and Sciences Promotion and Tenure Advisory Committee, 2005 - 2008.
Faculty Senate Budget and Compensation Committee, Chair, 2006- 2008.
Faculty Senate Budget and Compensation Committee, 2008- present.
College of Arts and Sciences Committee on Educational and Informational Technology, 2005-.
Director, University of Miami Institute of Theoretical and Mathematical Ecology, 2007-present.
Faculty Senate Tenure Review Board, Chair, 2008- 2009.
Departmental Hiring Committee, 2008-2010.
Departmental Ad Hoc Committee on Teaching Loads, 2008-2009.
Special Liaison to the Dean of the College of Arts and Sciences for Promotion and Tenure in the Life and Physical Sciences 2009-2010.
Faculty Senate Budget and Compensation Committee, Chair, 2010-.
Departmental Planning Committee, 2010-.
Departmental Mathematical Biology Search Committee, 2010-2011.
College of Arts and Sciences Strategic Planning Committee for Faculty Development and Governance, 2011-present.
Faculty Senate General Welfare Committee, 2011-.