

Curriculum Vitae

George Thomas Yates

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Education:

Ph.D.	1977	Engineering Science	California Institute of Technology
M.S.	1972	Engineering Science	California Institute of Technology
B.S.	1971	Engineering Science	Purdue University

Professional Experience:

2002-	Assistant Professor, Mathematics & Statistics,	Youngstown State University
1998-2002	Adjunct Professor in Mathematics,	Kent State University, Trumbull
1995-2002	Independent Consulting	
1998	Adjunct Professor in Mathematics,	Mount Union College
1992-95	Honorary Senior Lecturer / Senior Research Associate in Mechanical Engineering,	University of Hong Kong
1985-92	Senior Scientist in Engineering Science,	California Institute of Technology
1980-82	1988-92 Lecturer,	California Institute of Technology
1977-85	Research Fellow in Engineering Science,	California Institute of Technology

Awards, Honors and Other Recent Professional Activities:

2006 Distinguished Professor Award for Excellence in Teaching at YSU, 2006.
2005 Named in Resolution by Youngstown State University Board of Trustees in “Congratulating Students who made Presentations at the National Mathfest Meeting.”
2003 Named in Resolution by Youngstown State University Board of Trustees in “Congratulating Mathematics Students and the Department of Mathematics and Statistics on their Performance in the 2003 Mathematical Modeling Competition.”
1991 STA Fellow, Ship Research Institute, Tokyo, Japan. Summer, 1991.
1989 Organizer & Chairman of *Symposium on Fluid Dynamics to Honor T. Y. Wu*, Aug. 17-18, 1989, California Institute of Technology.

Teaching Experience:

2002-2006	Calculus / Numerical Analysis / Survey of Mathematics / Statistics
1996-2003	Calculus / College Algebra / Fluid Power, Hydraulics
1995-2000	Algebra / Geometry and Trigonometry
1992-95	Mathematics / Numerical Methods / Heat Transfer / Energy Systems
1990	Methods of Applied Mathematics
1988-89	Fluid Mechanics and Gas Dynamics
1982-84	Low Reynolds number flows
1978-82, 1991-92	Engineering Mathematics, Fluid Mechanics

Research Interests:

Interdisciplinary instruction in Mathematics and Biology. Microbial growth curve analysis; Biological fluid transport mechanisms; Mechanics of swimming and flying; Nonlinear and dispersive waves and stability of steady state solutions and the unsteady response when external forcings are applied; Innovative education and teaching methods incorporating technology and numerical methods.

Grants:

NSF DUE 0337558: Interdisciplinary undergraduate education through intensive research experiences in mathematics and biology (\$100,000; 9/2003-9/2005). Co-Principal Investigator.

Proposal to NSF (received top rating of “highly competitive”, not funded): UBM-Group, RUI: Sustained Undergraduate Research Experiences in Biology and Mathematics (YSU-BaM). Principal Investigator.

Proposal to NSF (not funded): UBM, RUI: Interdisciplinary Undergraduate Education through Sustained Research Experiences in Mathematics and Biology. Principal Investigator.

Professional and Honorary Societies:

Mathematical Association of America (2002-)

Society for Mathematical Biology (2004-)

American Physical Society (Division of Fluid Dynamics) (Member, 1985-)

American Society of Mechanical Engineers (Member, 1977-)

American Society of Civil Engineers (Member, 1993-)

International Society of Offshore and Polar Engineers (Member, 1994-)

Sigma Xi (Member, 1973-)

Referee and Review Services:

NSF Proposals, Quarterly of Applied Mathematics, Journal of Fluid Mechanics, Wave Motion, Physics of Fluids, Journal of Fluids Engineering, Journal of Applied Mechanics, Journal of Engineering Mechanics, Europhysics Letters, Journal of Experimental Biology, Canadian Journal of Zoology, American Zoologist.

Consulting:

Department of Navy, Bioject, Engineering & Science Associates, Mini-Med Technologies (Siemens), KF Applications, Kringeta Design, Delphi Packard Electric.

Community Service:

Kiwanis Club of Boardman (Member 1996- ; President 1998-99; Div. 21 Lt. Gov. 2000-01)

Pacific Collegiate Hockey Association (Sec.-Treas. 1984-92)

Caltech Hockey Club (President 1977-92)

Recent Seminars, Workshops and Meetings (2002-06):

- Aug. 9-12, 2006. MathFest 2006, MAA and Pi Mu Epsilon (PME) Student Papers. Knoxville, Tennessee. (Five of nine students won awards for their presentations.)
- March 31 – April 1, 2006. OHIO section meeting of MAA at the University of Akron. (Five of nine attending students gave presentations; one team finished 3rd in the Student Problem-Solving Competition.)
- November 17, 2005. Conduct a workshop for local High School students at YSU's 3rd Annual MathFest, "Growth, Decay, and Forensic Science". Youngstown State University, Youngstown, Ohio.
- Sept. 30-Oct. 1, 2005. Contributed Paper "Singular Perturbation Analysis of Bacterial Growth in Presence of Toxins". At Thirty-Third Annual Mathematics & Statistics Conference "Mathematics and Biology", Miami University, Oxford Ohio.
- Aug. 4-6, 2005. MathFest 2005, MAA and Pi Mu Epsilon (PME) Student Papers. Albuquerque, New Mexico. (Five of seven students won awards for their presentations.)
- March 21, 2005. Special Evening Lecture. "Generation, Propagation and Inundation of Tsunamis". Gerace Research Station, San Salvador, Bahamas.
- February 15, 2005. Joint Mathematics Department Colloquium and Pi Mu Epsilon Featured Speaker. "Tsunamis and Mathematics". Youngstown State University, Youngstown, Ohio.
- November 18, 2004. Conduct a workshop for local High School students at YSU's 2nd Annual MathFest, "The Mathematics of Bio-Diversity". Youngstown State University, Youngstown, Ohio.
- Aug. 11-14, 2004. MathFest 2004, MAA and Pi Mu Epsilon (PME) Student Papers. Brown University, Providence, Rhode Island.
- July 25-28, 2004. Invited presentation at the International Conference for Mathematics in Biology and Medicine (Annual Meeting for the Society for Mathematical Biology), "Interdisciplinary Education for Students in Mathematics and Biology". University of Michigan, Ann Arbor, Michigan.
- June 20-25, 2004. Presentation at the 23rd International Conference on Offshore Mechanics and Arctic Engineering, "Interdisciplinary Education and Research Experiences for Undergraduate Students in Mathematics and Biology". Vancouver, British Columbia, Canada.
- March 25-26, 2004. Invited presentation at the Project NExT Workshop, "Mathematical Biology and Interdisciplinary Undergraduate Education". Attend MAA – Ohio Section, Spring Meeting at The University of Cincinnati, Cincinnati, Ohio.
- October 30, 2003. Conduct a workshop for local High School students at YSU's MathFest, "Mathematics in Biology - Modeling Population Growth and Decline". Youngstown State University, Youngstown, Ohio.
- July 31-Aug. 2, 2003. MathFest 2003, MAA and Pi Mu Epsilon (PME) Student Papers. Boulder, Colorado.

July 21-25, 2003 MAA sponsored workshop on "Creating and Teaching Courses that Integrate Biology and Mathematics", Hope College, Holland, Michigan.

Oct. 25, 2002 Ohio MAA/Ohio MATYC Fall 2002 Joint Meeting
Kent State University, Trumbull Campus, Warren, Ohio, USA