

April, 2011.

TONY MAXWORTHY

Born: London (Ealing), England  
May 21, 1933

Home Address: 5111 Bounty Lane  
Culver City, CA 90230

Naturalised U.S. citizen  
March 17, 1961, Los Angeles.

B.S. Mechanical Engineering, 1954, Imperial College, London  
(1st Class Honours).

Also: Associate of the City and Guilds of London Institute (ACGI)

M.S. Mechanical Engineering, 1955, Princeton University

Ph.D. Mechanical Engineering, 1960, Harvard University  
Thesis: Flame Propagation in Tubes

1954-55 Howard C. Phillips Fellow, Princeton University

1955-59 Teaching and Research Assistant, Harvard University

1960-67 Group Supervisor, Jet Propulsion Laboratory California  
Institute of Technology

1965-67 Member, N.A.S.A. Advisory Comm. on Fluid Dynamics

1965,1970 Lecturer, Summer School in Geophysical Fluid  
1972,1983 Mechanics, Woods Hole Oceanographic Institute

1967-70 Associate Professor, Departments of Aerospace and  
Mechanical Engineering, University of Southern  
California

1970- Professor, Departments of Aerospace and Mechanical  
Engineering, University of Southern California

1988 - Smith International Professor of Mechanical and Aerospace  
Engineering, U.S.C.

1979-1989 Chairman, Department of Mechanical Engineering,  
University of Southern California

1973-75 Member of Editorial Board of "Geophysical Fluid  
Dynamics"

1974

1993-Present Senior Visitor, Department of Applied Mathematics and  
Theoretical Physics, Cambridge, England; Visiting Fellow (1974) and  
Life Fellow (1975-present), Clare Hall, Cambridge, England.

1974-79 Executive Committee, Division of Fluid Dynamics, American  
Physical Society, Vice Chairman (1976-77), Chairman (1977-78)

Summer,  
1975

Visitor, Max Planck Institute Fur Stromungsforschung Gottingen,  
B.R.D.

1975	Fellow, American Physical Society
1976	Senior Post Doctoral Fellow, National Center for Atmospheric Research, Boulder, Colorado
1976-83	Member of Editorial Board of "Dynamics of Atmospheres and Oceans"
Summer, 1978,1984	Visiting Fellow, Research School of Earth Sciences, Australian National University, Canberra
1980	Halliburton Award for Research - U.S.C.
1978-81	Editorial Board, "Physics of Fluids"
1981,82 Summer 1983, 1986	Alexander von Humboldt Senior Scientist Awardee, Federal Republic of Germany, Tenure at Inst. f. Hydromechanik, Univ. Karlsruhe and Lehrstuhl f. Stromungsmech., Fried.-Alex. Univ., Erlangen-Nurnburg
1982, Summer 1983 1985 1986 1993	Professeur Associe, Inst. de Mecanique, Universite de Grenoble
1983	Associate Member, A.S.M.E. Fluid Mechanics Committee
1984	Senior Queen's Fellow in Marine Sciences, Commonwealth of Australia, Tenure at the University of Western Australia
1985-87	A. P. S. Fluid Mechanics Prize Committee
1986	Forman Visiting Professor of Aeronautics, The Technion, Haifa, Israel
1987 - 1996	Co-Editor, Zeitschrift fur angewandte Math. und Physik, (Z.A.M.P.). Basel, Switzerland
1988-91	A.P.S. Fellowship Committee
1988 - 1996	Member Editorial Board, Geophysical & Astrophysical Fluid Dynamics
1988	Visiting Prof., Scuola Aeronautica, Univ. Polytechnica de Madrid, Spain
1988	Visiting Prof., Inst. Superior Technico, Lisbon, Portugal
1989	Visiting Prof., E.T.H. Zurich, Switzerland
1989-1999	Visiting Prof., E.P.F. Lausanne, Switzerland
1990	Glennon Senior Fellowship-Univ. of Western Australia
1990	Senior Scientist Fellowship-Norwegian Natl. Science Foundation
1990	Otto Laporte Award of the American Physical Society

- 1991 Elected Member, National Academy of Engineering
- 1991 Member, Research Advisory Board, National Water Research Institute
- 1992 Chairman, NASA Review Panel on "Interfaces and Stability"
- 1993 F.W. Mosey Scholarship, Univ. of Western Australia.
- 1995-Present Professeur Associe, Ecole Sup. Physique et Chimie Industrielle de la Ville de Paris.
- 1996 Shimizu Corporation Visiting Professor.  
1996-Present Consulting Professor.  
Department of Civil and Environmental Engineering, Stanford University.
- 1997 Lecturer, Geophysical Fluid Dynamics Summer School, DAMTP, University of Cambridge.
- 2001 Senior Visiting Scientist, CSIRO Atmospheric Research, Aspendale, Victoria, Australia.
- 2001 Elected Fellow, American Academy of Arts and Sciences.
- 2002 Professeur Invite, Institute de Mechanique des Fluides de Toulouse.
- 2002 S.S.Penner Distinguished Lecturer: "A Fascination with Fluids," Department of Mechanical and Aerospace Engineering, University of California San Diego.
- 2005 G.I.Taylor Medallist of the Society of Engineering Science.  
Stern Lecturer, "A Fascination with Fluids: Vortices and Vortex Breakdown," Florida State University.
- 2005 Visiting Professor, Department of Civil and Environmental Engineering, University of Canterbury, Christchurch, NZ.
- 2011 Fluid Dynamics Prize of the American Physical Society.

**Patents:** Nov. 5th. 1991. "Delta Wing with Lift-enhancing Flap. " No. 5,062,595.

**Consultant to:**

Vehicle Research Corporation, (1967-72)  
Jet Propulsion Laboratory, (1968- 90)  
Systems, Science and software, (1972-75)  
Xonics, Inc., (1972-79)  
Aero Vironment, Inc. (1973-80)  
Brown, Boveri Research Centre, Baden, Switzerland, (1975-85 )  
Dynamics Technology Inc., (1977-81)  
Flow Corporation, (1979-81)  
Stanford University, Civil Engineering Department, (1996-2006)

**Society Memberships:**

National Academy of Engineering (Member)  
American Academy of Arts and Sciences (Fellow)  
American Physical Society (Fellow)  
American Geophysical Union (Member)  
EUROMECH (Member)

**Invited Lectures: (Meetings)**

- 1972 3rd International Colloquium on the Gas Dynamics of Explosions and Reactive Systems, Marseille France "Laboratory Models of Rapidly Swirling Flows with Application to Atmospheric Vortices"
- 1979 14th Biennial Symp. on Fluid Dynamics, Btazjewko, Poland, "The Dynamics of the Jovian Atmosphere"
- 1980 Annual British Theoretical Mechanics Conference, Cambridge, England "Jovian Atmospheric Dynamics"
- 1981 Workshop on "Non-Linear Properties of Internal Waves" La Jolla, CA. "Non-Linear, Dispersive Waves in the Laboratory and in Nature"
- 1981 I.U.T.A.M Conference on "Intense Atmospheric Vortices" Reading, England "The Laboratory Modelling of Atmospheric Vortices: a Critical Review"
- 1982 Meeting on "Waves on Interfaces" Madison, Wisconsin "Solitary Waves on Density Interfaces"
- 1983 Meeting on "Turbulence and Predictability in the Jovian Atmosphere" Enrico Fermi Inst., Varenna, Italy. "The Nature of Large-Scale Turbulence in the Jovian Atmosphere"
- 1983 I.U.T.A.M. Meeting on "Turbulence and Chaotic Behaviour in Fluids", Kyoto, Japan "Dynamics of the Jovian Atmosphere"
- 1985 Annual Meeting of the French Physical Soc. Nice, France "Waves and Mixing in Stratified Fluids"
- 1985 Mid-West Applied Mechanics Lecture Series [Nine University Tour]
- 1986 10th National Congress of Applied Mechanics, Austin, Texas, "Fluid Dynamics of Natural Phenomena"
- 1986 Lecture Series 10. "Introduction to Vortex Dynamics" Von Karman Inst. for Fluid Dynamics, Brussels, Belgium
- 1986 A.P.S.-D.F.D. Annual Meeting Columbus, Ohio, "Fluid Dynamics of Natural Phenomena"
- 1987 I.U.T.A.M Conference on "Vortex Dynamics", Tokyo, Japan. Also member of Scientific Committee. "Waves on Vortex Cores"
- 1989 European Geophysical Soc. Symp. on Chaos, Turbulence & Nonlinear Variability in Geophysics, Barcelona, Spain. "Application of Fractal Measures to Decaying, Two-Dimensional Turbulence", with G. Spedding.
- 1991 European Geophysical Society Symp. on Chaos, Turbulence and Nonlinear Variability in Geophysics, Wiesbaden, Germany. "Wavelet Analysis of 2D Turbulent Fields." with G.R. Spedding & T.Dallard.
- 1991 Centre International des Sciences Mecaniques, Udine, Italy. "Rotating Fluids in Geophysical and Industrial Applications."
- 1991 11th. Biennial International Estuarine Research Federation Conference, San Francisco, CA. "The Hydrodynamics of Estuarine Fronts."

- 1990 Otto Laporte Award Lecture, Amer. Physical Soc.-DFD. "Bubble Dynamics,"
- 1992 "Rotating Convection," for the Symposium on "Developments in Fluid Mechanics, in Celebration of Prof. W. Fiszdon's 80th. Birthday." Warsaw, June 25-27th.
- 1995 "Convection in a Rotating Fluid with Oceanographic Applications," 20th. General Assembly of the European Geophysical Society, 3-7th April.
- 1996 "Experiments on Stratified Turbulence," Workshop on Stratified and Rotating Turbulence," NCAR, Boulder, CO, July 30th-Aug. 2nd.
- 1997 "Convectively Driven Geophysical Flows," EUROMECH 3rd. European Fluid Mechanics Conf., Goettingen, Germany, Sept. 15th -18th.
- 1997 "The Role of Laboratory Experiments in Physical Oceanography: a Review," APROPOS Workshop on Future Directions in Physical Oceanography, Asilomar Conf. Center, Monterey, CA, Dec. 14th-18th.
- 1998 "The Flickering Candle: Transition to a Global Oscillation and Turbulence in a Thermal Plume," European Turbulence Conf. 7 (ETC7), St Jean Cap Ferrat, France, June 29th-July 3rd.
- 1999 "Convection in a Long Channel with a Hydraulically Constrained Exit Condition," Session JSP49, Small-Scale Flow, Turbulence, and Mixing, 22nd General Assembly IUGG, Birmingham, England, July 18th-30th.
- "Unifying Concepts in Interfacial Dynamics," Conf. on Interfaces for the 21st Century, (S.H.Davis 60th Birthday Celebration), Monterey, CA, Aug. 16th-18th.
- 2001` "Miscible Fluid Displacements in Round Tubes-A Space Flight Experiment," Conf. on The Dynamics of Miscible Interfaces, ESPCI, Paris, France, July 2<sup>nd</sup> – 5<sup>th</sup>.
- 2002 S.S.Penner Lecturer, "A Fascination with Fluids," Department of Mechanical and Aerospace Engineering, University of California San Diego
- 2005 Melvin Stern Lecturer, "A Fascination with Fluids: Vortices and Vortex Breakdown," Department of Oceanography, Florida State University, Tallahassee.

**Publications:**

1. "Discontinuity Properties of Laminar Flames," Physics of Fluids 4, (5), 1961.
2. "Flame Propagation in Tubes," Physics of Fluids 5, (4), 1962.
3. "A Liquid Sodium Flow Facility for Magneto-Fluid-Dynamic Research," Review of Scientific Instruments 32, (11), 1961.
4. "On the Mechanism of Bluff Body Flame Stabilization at Low Velocities," Combustion and Flame 6, (4), 1962.
5. "Measurements of Drag and Wake Structure in Magneto-Fluid-Dynamic Flow About a Sphere," Proc. of 1962 Heat Transfer and Fluid Mechanics Institute.
6. \*"Dynamics of Rotating Fluids," Jet Propulsion Lab Reports, Space Program Summary 37-16, 4, August 31, 1962.
7. \*"Similarity Between Magneto Fluid Dynamics Flows and Motions of a Rotating Fluid," Jet Propulsion Lab Reports, Space Program Summary 37-21, 4, June 30, 1963.
8. \*"Preliminary Measurements in the Liquid Sodium Tunnel," Jet Propulsion Lab Reports, Space Program Summary 37-24, 4, December, 1963.
9. \*"Flow Between a Rotating Disc and a Stationary Co-axial Disc," Jet Propulsion Lab Reports, Space Program Summary 37-24, 4, June 30, 1962.
10. "Accurate Measurements of Sphere Drag at Low Reynolds Numbers," J. Fluid Mech. 23, (2), 1965.
11. "An Experimental Determination of the Slow Motion of a Sphere in a Rotating, Viscous Fluid," J. Fluid Mech. 23, (2), 1965.
12. \*"The Flow Creating a Concentration of Vorticity Over a Stationary Plate," Jet Propulsion Lab Reports, Space Program Summary 37-44, 4.
13. "The Observed Motion of a Sphere Through a Short, Rotating Cylinder of Fluid," J. Fluid Mech. 31, (4), 1968.
14. "Experimental Magneto-Fluid Dynamics: Pressure Distribution Measurements Around a Sphere," J. Fluid Mech. 31, (4), 1968.
15. "Magneto-Fluid Dynamic Pipe Flow," Paper No. 15, Proc. 1968 Heat Transfer and Fluid Mechanics Inst., Seattle, Washington.
16. \*"Experimental Magneto-Fluid Dynamics: Flow Through a Solenoid of Finite Length," Jet Propulsion Lab Reports, T. R. 32 1198.
17. "Experimental Magneto-Fluid Dynamics: Flow Over a Sphere With a Cylindrical Afterbody," J. Fluid Mech. 35, (2) 1969.
18. "A Storm in a Teacup," J. of App. Mech. 35, (4) 1968.
19. "Experiments on the Flow Around a Sphere at High Reynolds Numbers," J. of App. Mech., September 1969; also presented at 1969 App. Mech. Conf., Albuquerque, New Mexico.
20. "A Simple Observational Technique for the Investigation of Boundary Layer Stability and Turbulence," Proc. Conf. on Turbulence in Liquids, Rolla, Missouri, 1969.
21. Appendix on "Some Experimental Observations" to a paper by D. W. Moore and P.

- G. Saffman entitled "The Flow Induced by the Transverse Motion of a Thin Disc in Its Own Plane Through a Contained Rapidly-Rotating, Viscous Fluid," J. Fluid Mech. 39,(4), pp. 831-847, 1969.
22. "The Flow Created by a Sphere Moving Along the Axis of a Rotating Slightly-Viscous Fluid," J. Fluid Mech. 40, (2) 1970.
  23. "Structure and Stability of Vortex Rings," J. Fluid Mech. 51, (1), 1972.
  24. "Laboratory Models of Rapidly Swirling Flows with Application to Atmospheric Vortices," presented at the 3rd International Colloquium on the Gasdynamics of Explosions and Reactive Systems, Marseille, France, September 1971, Astronautica Acta, 17, 4/5 (1972).
  25. "Experimental and Theoretical Studies of Horizontal Jets in a Stratified Fluid," Proceedings of the International Symposium on Stratified Flows, Novosibirsk, U.S.S.R., August 1972.
  26. "Comments on "A Mechanism for Jupiter's Equatorial Acceleration" by P. Gierasch and P. Stone, J. Atmos. Sci. 29, 5, 1972.
  27. \*"A Critical Review of Some Aspects of the Dynamics of Jupiter's Atmosphere," JPL Planetary Atmospheres Section Report, 1972.
  28. "A Review of Jovian Atmospheric Dynamics," Planetary and Space Science, 21, 623, 1973.
  29. "A Vorticity Source for Large Scale Dust Devils and Other Comments on Naturally Occurring Columnar Vortices," J. of Atmos. Science, 30, 8, pp. 1717-22, 1973.
  30. "On the Motion of Turbulent Thermals," with M. P. Escudier, J. of Fluid Mech. 61, 3, pp. 541-552, 1973.
  31. "Turbulent Vortex Rings," J. Fluid Mech. 64, 2, 227, 1974.
  32. \*"Experiments on Rotating and Stratified Fluids with Oceanographic Application," Annual Reviews of Fluid Mechanics, Vol. 7, 1975, (with F. K. Browand).
  33. "A Laboratory Model of the Antarctic Circumpolar Current, Part I", Proceedings of the 10th Annual Meeting of Soc. of Eng. Science, Inc., Raleigh, N.C., 1973.
  34. "On the Motion of Aircraft Trailing Vortices", J. Appl. Mechs. 42, 279-282. 1975.
  35. "A Wave Driven Model of the Jovian Equatorial Jet", Planetary and Space Science 23, 1223-1233, 1975.
  36. "A Solitary Wave Theory of the Great Red Spot (and other observed features in the Jovian atmosphere)", with L. G. Redekopp, Mtg. on Jupiter and Eros, Tucson, Ariz., May 18-23, 1975. Also ICARUS 29, 2.
  37. "Experiments on Collisions Between Solitary Waves", J. Fluid Mechs. 76, 177-185.
  38. "Solitary Waves in the Jovian Atmosphere: A New Theory of the Great Red Spot", NATURE, April, 1976, with L. G. Redekopp.
  39. "A Laboratory Model of Dust Devil Vortices", Dyn. of Atmos. and Oceans, 1976, 1, Part 3, 181-214, with J. B. Mullen.
  40. "Some Experimental Studies of Vortex Rings", J. Fluid Mech. 81, 465-495, 1977.
  41. "Topographic Effects in Rapidly Rotating Fluids: Flow Over a Transverse Ridge", N.

- Rott 60th Birthday Volume of Z.A.M.P., 28, 853-864, 1977.
42. "On the Production and Interaction of Planetary Solitary Waves: Applications to the Jovian Atmosphere", with L. G. Redekopp and P. D. Wiedman, ICARUS, 33, 388-409, 1978.
  43. "Experiments on the Strong Interaction Between Solitary Waves", with P. D. Wiedman, J. Fluid Mech. 85, 417-431, 1978.
  44. "On the Formation of Internal Solitary Waves from the Gravitational Collapse of Mixed Regions in Two and Three Dimensions", J. Fluid Mech. 96, 1, 1980.
  45. "A Note on the Internal Solitary Waves Produced by Tidal Flow Over a Three Dimensional Ridge", J. Geophys. Res. 84, 338-346, 1979.
  46. "Experiments on the Weis-Fogh Mechanism of Lift Generation by Insects in Hovering Flight -- Part 1. Dynamics of Fling", J. Fluid Mech. 93, 47-63, 1979.
  47. "The Gravitational Collapse of a Mixed Region into a Linearly Stratified Fluid", with R. Amen, J. Fluid Mech. 96, 1, 1980.
  48. "Comments on 'Preliminary Study of Mutual Slip-Through of a Pair of Vortices'", Phys. Fluids 22, 1, 1979.
  49. "The Non-Linear Capillary Instability of a Liquid Jet, Part II, Experiments on Jet Behavior before Droplet Formation", with K. C. Chaudhary, J. Fluid Mech. 96, 2, 1980.
  50. "Part III. Experiments on Satellite Drop Formation and Control," with K. C. Chaudhary, J. Fluid Mech. 96, 2, 1980.
  51. \*"'The Fluid Dynamics of Insect Flight", Annual Reviews of Fluid Mechanics, Annual Reviews Inc, Palo Alto, 1981.
  52. "Classification of Confined-Vortex Flow Regimes", Symp. on Vortex Flows A.S.M.E. - W.A.M., Chicago, 1980, with Escudier, Bornstein & Zehnder.
  53. \*"'The Dynamics of the Jovian Atmosphere", Proc. of the 14th Biennial Fluid Dynamics Symposium, Blazejewko, Poland September 1979, Polish Academy of Sciences.
  54. "A Possible Fluid Dynamical Interpretation of some Reported Features in the Jovian Atmosphere", Science, 210, 1350, 1981, with L. G. Redekopp.
  55. \*"'Non-Linear, Dispersive Waves in the Laboratory and in Nature", Proc. of Workshop on "Non-Linear Properties of Internal Waves, S.I.O., La Jolla, California, January 15-17, 1981, Conf. Proc. Amer. Inst. of Physics, 1982.
  56. \*"'The Laboratory Modelling of Atmospheric Vortices: A Critical Review", I.U.T.A.M. Conference on Intense Atmospheric Vortices, Reading, England, July 1981, Conference Proceedings - Springer Verlag, 1982.
  57. "Measurement of a High-Speed Jovian Jet", Planetary and Space Sciences 32, 1053 (1984).
  58. "The Viscous Spreading of Plane and Axisymmetric Gravity Currents", J. Fluid Mechs. 121, 27, (1982), with N. Didden.
  59. "Measurements and Interpretation of a Jovian Near-Equatorial Feature", Planetary and Space Science, 33, 987-991, 1985.
  60. "The Dynamics of Confined Vortices", Proc. Roy. Soc., Ser. A382, 335-360, (1982),

with Escudier & Bornstein.

61. "Observations of Inertial Waves in a Homogeneous, Rotating Fluid, J. Fluid Mechs. 125, 319, (1982), with K. Heikes.
62. "Experiments on Solitary, Internal Kelvin Waves", J. Fluid Mechs. 129, 365-383, (1983).
63. "The Dynamics of Double-Diffusive Gravity Currents", J. Fluid Mechs. 128, 259-282 (1983).
64. "Gravity Currents with Variable Inflow, J. Fluid Mechs. 128, 247-257 (1983).
65. "On the Generation and Evolution of Internal Gravity Waves", J. Fluid Mechs. 145, 124, (1984) with F. Lansing.
66. "Wave Motions on Vortex Cores", J. Fluid Mechs. 151, 141-165, (1985) with E. J. Hopfinger and L. G. Redekopp.
67. \*"Solitary Waves on Density Interfaces", Proc. of Conference on "Waves on Interfaces", Madison, Wisconsin, Oct. 1982.
68. "Waves on Vortex Cores and Their Relationship to Vortex Breakdown". Proc. AGARD Mtg. on Vortex Flows, Brussels, 1983, with M. Mory & E. Hopfinger.
69. \*"The Nature of Large-Scale Turbulence in the Jovian Atmosphere". Proc. Mtg. on "Turbulence and Predictability in Geophysical Fluid Dynamics and Climate Dynamics", Varenna, Italy, June 1983, with J. L. Mitchell.
70. \*"Dynamics of the Jovian Atmosphere". Invited paper, Proc. of Mtg. on "Turbulence and Chaotic Behavior in Fluids", Kyoto, Japan, 1983.
71. \*Flow Visualisation of Piston-Driven, Unsteady Separation at a Sudden Expansion in a Tube", Report of L.S.T.M., Univ. Erlangen-Nurnberg, 1985, with F. Durst and J. Pereira.
72. "Internal Wave Generation and Propagation in a Rotating-Stratified Fluid", J. Geophys. Res. 89, 6383-96, 1984, with G. Chabert d'Hieres and H. Didelle.
73. "The Formation of Tidal-Mixing Fronts", Ocean Modelling, No. 55, Mar 1984.
74. "A Two-Layer Model of Shear Driven Coastal Upwelling in the Presence of Bottom Topography", J. Fluid Mechs. 159, 503-531, 1985, with S. Narimousa.
75. "The Generation of Kelvin Waves by Tidal Flow over Bottom Topography in a Narrow Channel", J. Geophys. Res. 90, 7235-7242, 1985, with Y. N. Liu.
76. "Natural Flow Visualisation in Lake Eyre, South Australia, " EOS 67, No. 5, Feb. 4, 1986, with J. Bye, R. Byron-Scott and R. Nunes.
77. "An Experimental Study of Entrainment, Mixing and Chemical Reaction in a Plane, Turbulent Shear Layer", with J. C. Lasheras and J. S. Cho. In the Proceedings of the 20th Internat. Symp. on Combustion, August , 1984.
78. "The Origin of Three-Dimensional Vortical Structures in a Plane, Free-Shear Layer". Nov. 1986, J. Fluid Mechs., with J. C. Lasheras and J. S. Cho.
79. \*"Experiments in a Hele-Shaw Cell". In Experiments in Fluid Dynamics, Ed. R. C. Granger. (1986).
80. "Wave Motions on Concentrated, Columnar Vortices", M. Kruskal Festschrift.

Special issue of Physica. D. (1986), 18, 149.

81. "Experiments and Observations on the Effects of Bottom Topography on Coastal Upwelling, Proc. of Conf. on Vertical Motion in the Tropical Oceans. Paris, May 1985. With S. Narimousa
82. "A Note on Turbulent Mixing Across a Density Interface in the Presence of Rotation", J. Phys. Ocean. 16, 1136. (1986)
83. \*"The Laboratory Modelling of Coastal Upwelling". Oceanography Report Section of EOS 67, No. 1, Jan. 7, 1986. (With S. Narimousa).
84. "Structure of the Vorticity Field in a Plane, Free Shear Layer", Turbulent Shear Flows 5, Durst, Launder & Schmidt Eds., with J. C. Lasheras.
85. "Piston-Driven, Unsteady Separation at a Sudden Expansion in a Tube". Phy. Fl. A.I. No. 7, 1249-60 (1989), with F. Durst and J. Pereira.
86. "The Flow-Field and forces Generated by an Opening, Two-Dimensional Wing-Pair". 165, 247 (1986) J. Fluid Mechs., with G. Spedding.
88. "Differential Mixing in a Stratified Fluid". J. Fluid Mechs., 189, 571-98 (1988), with S. G. Monismith.
89. "Differential Deepening of a Mixed Layer in a Stratified Fluid", I.A.H.R. 21<sup>st</sup> Congress, Aug. 1985, Melbourne, Australia, with S. Monismith.
90. "The Non-Linear Growth of a Gravitationally Unstable Interface in a Hele-Shaw Cell", J. Fluid Mechs. 177, 207-232 (1987) Also a note in Phys. Fluids, 28, 2637, 1985 (1st Prize A.P.S.-D.F.D. Photo Competition).
91. "Coastal Upwelling on a Sloping Bottom: The formation of jets, plumes and pinched-off cyclones". J. Fluid Mechs. 176, 169-190 (1987), with S. Narimousa.
92. "Coastal Upwelling Driven by a Discontinuous Stress Distribution in the Presence of Bottom Topography.", J.P.O. 16, 2072-83 (1986), with S. Narimousa.
93. "Collapse of a Turbulent Front in a Stratified Fluid. Part I. Nominally Two-Dimensional Evolution in a Narrow Tank", J. Geophys. Res. 92, 5427-33 (1987), with Y. N. Liu and G. R. Spedding.
94. "Bubble Formation, Motion and Interaction in a Hele-Shaw Cell", J. Fluid Mechs.-G. I. Taylor Special Volume, 173. 1986.
95. \*"The Fluid-Dynamics of Natural Phenomena", Invited lecture, 10th U. S. National Congress of Applied Mechanics. A.S.M.E. Trans. 1986.
96. \*"Geophysical Vortices, Vortex Rings and Waves on Vortices", Lecture Notes for Short Course at V.K.I., Rhode-St.-Genese, Belgium, 1986.
97. "The Effects of Rotation on Selective Withdrawal from a Density-Stratified Reservoir". 3rd Int. Symp. on Stratified Flows. Caltech 1987, also J. Fluid Mechs., 199, 377-401, 1989, with S. G. Monismith.
98. "Experiments in Two-Dimensional Turbulence: The Interaction and Merging of Vortices". Proc. Inter. Conf. on Fluid Mechanics, Beijing, China, July 1987, with P. Caperan and G. R. Spedding.
99. "A Note on the Effects of Coastline Perturbations on Coastal Currents and Fronts", J.P.O., 17, 1296-1303, 1987, with S. Narimousa.

100. "Applications of a Laboratory Model to the Interpretation of Satellite and Field Observations of Coastal Upwelling", Dyn. of Atmos. & Oceans, 13, 1-46, 1989, special issue on laboratory modeling of geophysical phenomena, with S. Narimousa.
101. "The Evolution of Grid-generated Turbulence in the Neighborhood of a Density Step", 3rd Int. Conf. on Stratified Flows. Caltech 1987, with R. Amen and F. Browand.
102. "Quasi 2-D Turbulence and Vortices in a Stratified Fluid", 3rd Int. Conf. on Stratified Flows. Caltech 1987 with P. Caperan and G. R. Spedding.
103. "The Structure of Meso-Scale Baroclinic Turbulence", 6th Conference on Turbulent Shear Flows, Toulouse, France, Aug. 1987, with S. Narimousa and G. R. Spedding.
104. "Waves on Vortex Cores", Proc. IUTAM Symp. on "Fundamental Aspects of Vortex Motion", Tokyo, Aug. 31 - Sept. 4, 1987. (Invited lecture)
105. "Unsteady Vortex Flows over Delta Wings", AFOSR Conf. on Unsteady Aerodynamics, Colorado Springs, July 28 - Aug. 1, 1987, with G. R. Spedding and E. Rignot.
106. "Interaction de Tourbillons Bidimensionnelle de Meme Signe: Etude Experimentale et Numerique", Proc of Colloquium "Dynamique de fluides Geophysiques et Astrophysiques", Sept. 1987, Grenoble, France, with Ph. Caperan, J. Verron and E. J. Hopfinger.
107. "Bubble Rise in Tapered Tubes", Proc. of First World Conf. on Exptl. Heat Transfer, Fluid Mechs. & Thermodynamics, Dubrovnik, Jugoslavia, Sept. 1988.
108. "Laboratory Models of Oceanic Fronts", 4th Asian Conf. on Fluid Mechanics, Hong Kong, Sept. 1989. Also Phys. of Fluids, A.2, 1224-1230, 1990, with R.-S. Tseng.
109. "Evolution of a Freely Decaying Turbulence in a Shallow Layer of Stratified Fluid at Low Froude Numbers", IUTAM General Assembly, Grenoble, Aug. 1988, with G. Spedding and Ph. Caperan.
113. "Selective Withdrawal and Spin-up of a Rotating, Stratified Fluid", J. Fluid Mechs., 119, 377-390, 1989, with S. Monismith.
111. "An Experimental Study of Interface Instability in a Hele-Shaw Cell", 1st Caribbean Conf. on Fluid Dynamics, Univ. of the West Indies, Trinidad, January 1989. Also in Phys. Rev. A., 39, 5863-6.
112. "Llamas de Diffusion Tri-dimensionales Sometides a Perturbaciones Periodicas Simultaneas en las Direcciones Axial y Azimulal del Flujo", Ingeriera Mecanica, with Lasheras, Lecuona and Viedma.
113. "Experiments on the Structure and Dynamics of Forced Quasi-2D Turbulence", J. Fluid Mechs., 223, 113-133, 1990, with S. Narimousa and G. Spedding.
114. "Bubble Rise in a Hele-Shaw Cell: the Effect of Tip Bubbles", Phys. Rev. A., 41, 4367-4370, 1990, with E. Ikeda.
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