

1999 – 2003	James Fife Chair, Department of Civil & Environmental Engineering
1991 - 1999	Associate Dean of Engineering, University of California, Berkeley.
1980-85	Chairman, Department of Naval Architecture and Offshore Engineering, University of California, Berkeley.
1970-Present	President & Founder, Ship Research Inc., Kensington, CA
1968-69	Senior Research Engineer, Lockheed Missiles & Space Co., Sunnyvale, CA
1963-68	Principal Research Scientist, Hydronautics, Inc., Laurel, MD

Affiliations

Member, National Academy of Engineering

Fellow & Life Member, Society of Naval Architects & Marine Engineers.

Member, American Association of Engineering Education.

Commissioner, Commission on Engineering & Technical Systems,
National Research Council (1991-1996)

Member, Marine Board, National Research Council, 1984-1988
(Vice-Chair, 1986; Chair, 1987-88)

Secretary, The International Towing Tank Conference 1990-1993

Member, California Sea Grant Advisory Board, 1974 - 1995

External Advisory Boards for NSF (Division of Biological & Critical Systems), ONR (ocean
Engineering Division), Texas A&M (Offshore Technology Research Center)

Awards

Elected to the National Academy of Engineering	1998
The Davidson Medal, for excellence in Ship Hydrodynamics, The Society of Naval Architects & Marine Engineers	1992
Elected Chairman, Marine Board, National Research Council	1986-88
Stipendiat, Alexander von Humboldt-Stiftung during residence in Hamburg, Germany.	1976
Lincoln Arc Welding Award (for being the thesis adviser to Mr. Farrokh Mistree, whose thesis won a national award).	1974
Graduate Student Paper Prize, Society of Naval Architects and Marine Engineers.	1960
Stevenson Taylor Prize (for Marine Engineering Thesis), Webb Institute of Naval Architecture.	1959

American Bureau of Shipping Prize (for highest grades), Webb
Institute of Naval Architecture.

1959

Professional Societies

The Society of Naval Architects and Marine Engineers.
The Society of Sigma Xi.
American Society of Engineering Education

Languages

French (reading), German (reading, writing & some speaking), Thai (fluent)

Publications

1. "A Preliminary to the Investigation of the Torsion Loading of a Ship", SNAME Student Paper, San Francisco Section, 1960. (Awarded local and national SNAME graduate student paper prize.) 36 pp.
2. "The Static Stability of Ground Effect Vehicles--Thin Jet Theory", HYDRONAUTICS, Incorporated, Technical Report 011-1, December 1960, 37 pp. + 15 fig.
3. "Dynamic Heaving Motion of Ground Effect Machines", HYDRONAUTICS, Incorporated, Technical Report 011-3, March 1962 (with J.D. Lin), 18 pp. + 8 fig.
4. "Schiffe geringsten Wellenwiderstandes mit vorgegebenem Hinterschiff", Schiffstechnik, April 1962 (with J.V. Wehausen), Bd. 9 pp. 62-68.
5. "An Application of Linear Programming to the Fairing of Ships' Lines", A Symposium on Mathematical Programming, P. Wolfe (editor) McGraw-Hill, 1963 (with S.A. Berger), pp. 241-254.
6. "Ships of Minimum Total Resistance", The International Seminar on Theoretical Wave Resistance, University of Michigan, August 1963. Proceedings published October 1964 (with J.V. Wehausen, W.C. Lin), Vol. III, pp. 909-948.
7. "An Experimental Investigation of a Coanda Nozzle", HYDRONAUTICS, Incorporated, Technical Report 461-1, October 1964 (with T.T. Huang), 20 pp. + 13 fig.
8. "The Effect of Surface Tension on Ship Wave Resistance", Doctoral Thesis, The Institute of Engineering Research, University of California, Berkeley, Report No. NA 66-6, July 1966, 114 pp. + 6 fig.
9. "Mathematical Ship Lofting", Journal of Ship Research, December 1966, (with R.A. Tapia and D.A. Atkins), Vol. 10, pp. 203-222.
10. "The Analysis of the Control of Activated Anti-Roll Tanks", HYDRONAUTICS, Incorporated, Technical Report 490-2, December 1966 (with P. Dogan), 125 pp. + 127 fig.
11. "Rough Water Mating of Roll-on/Roll-off Ships with Beach Discharge Lighters", HYDRONAUTICS, Incorporated, Technical Report 636-1, July 1967 (with T. Hsieh, C.C. Hsu, D.P. Roseman), 68 pp. + 24 fig.

12. "The Design of Tanks for Use in an Active Tank System", HYDRONAUTICS, Incorporated, Technical Report 490-3, July 1967, 35 pp. +22 fig.
13. "An Analysis of Large Object Lift Systems", presented at the ASME Underwater Technology Division National Conference, 1967 (with E.R. Miller, Jr.), 42 pp. + 22 fig.
14. "The Design of Pumps for Use in an Active Anti-Roll Tank System", HYDRONAUTICS, Incorporated, Technical Report 490-1, October 1967 (with J. Dunne and S. Gyves), 37 pp. + 25 fig.
15. "Analysis of the Control of Activated Anti-Roll Tanks", presented at the Annual Meeting of the Society of Naval Architects and Marine Engineers, November 1967. Published in 1967 Annual Transactions, Vol. 75, pp. 296-331.
16. "On the flow Field Beneath a Moving Pressure Distribution Over the Sea", HYDRONAUTICS, Incorporated, Technical Report 709-1, December 1967 (with T.T. Huang and K.K. Wong), 33 pp. + 10 fig.
17. "Study of the Boundary Layer on Ship Forms", HYDRONAUTICS, Incorporated, Technical Report 608-1, January 1968 (with T.T. Huang), 22 pp. + 12 fig.
18. "Vehicles for Ocean Engineering", presented at the Diamond Jubilee Meeting of the Society of Naval Architects and Marine Engineers, June 1968 (with D. Rosemand and V. Johnson), published in Diamond Jubilee Proceedings, pp. 8-2 to 8-27.
19. "Computations of Ship Boundary Layers", presented at the 7th Naval Hydrodynamics Symposium, Rome 1968 (with T.T. Huang), 5 pp.
20. "Study of the Boundary Layer on Ship Forms", (with T.T. Huang), Journal of Ship Research, Sept. 1970, Vol. 14, No. 3, pp. 153-167.
21. "An Experimental Study to Determine the Motions and Mooring Tensions of Three Buoys", Lockheed Missiles and Space Co., Report LMSC/DO 22460, Dec. 1968, 88 pp. + 17 fig.
22. "Monte Carlo Methods in Ship Design" (17 pp.) and "Container Ship Loading: A Container Allocation Model" (65 pp.) (with P. Van Dyke). Proceedings of Seminar on Computer-Aided Ship Design, University of Michigan, June 1970.
23. "Automated Procedures for the Allocation of Containers on Shipboard" (with P. Van Dyke and P. Cojeen), presented at Washington Section SNAME, Sept. 1968, 35 pp.
24. "The Prediction of Sinkage and Trim for Ships" (with O. Sibul, R. Yeung and C. Scragg), Dept. of Naval Architecture, U.C. Berkeley Report No. 74-1, January 1974, 26 pp.
25. "When is Collision Unavoidable?" presented at the 10th Symposium of Naval Hydrodynamics, Massachusetts Institute of Technology, June 1974, pp. 277-293.
26. "Phase I Report on the Development of Technical Practice for Roll Stabilization System Selection" (with E. Miller and J. Slager), HYDRONAUTICS, Incorporated, Technical Report No. 7401.06-1, October 1974.

27. "Development of Technical Practices for Selection of Roll Stabilization Systems--Phase II--Roll Tanks" (with R. Barr and V. Ankudinov), HYDRONAUTICS, Incorporated, Technical Report 7401.26-1, January 1975, 67 pp. + Appendices + 40 figs.
28. "The Flow About Arbitrary, Three-Dimensional, Smooth Bodies", Journal of Ship Research, Vol. 19, No. 4, December 1975, pp. 206-218.
29. "Basic Naval Architectural Considerations for Concrete Ships and Vessels", presented at the Symposium on Concrete Ships, University of California, September 1975, 19 pp.
30. "Structural Tests of SL-7 Ship Model" (with H.G. Payer), under publication by the Ship Structural Committee, 100 pp. + 150 fig.
31. "The Computation of the Hydrodynamic Forces Induced by General Vibration of Cylinders", Institut fur Schiffbau, Report No. 346, August 1976, 49 pp.
32. "A Water-Turbine-Driven Propeller for High Performance Craft Propulsion", (with I. Shacham), January 1977, the AIAA Journal of Hydronautics.
33. "Transient-Maneuver Testing and the Equations of Maneuvering" (with J.V. Wehausen, C. Scragg, T. Frank, D. Loeser and O. Sibul), 11th Symposium of Naval Hydrodynamics, London, March 1976.
34. "Some Aspects of Ship Maneuverability as Applied to the Problem of Collision Avoidance" (with J.T. Dillingham), presented at the Symposium on Aspects of Navigability, Delft Hydraulics Laboratory, 16 pp., May 1978.
35. "Computation of the Hydrodynamic Forces Induced by General Vibration of Cylinders", Journal of Ship Research, Vol. 23, No. 4, March 1979, pp. 9-19.
36. "A Phenomenon Observed in Transient Testing", (with J.V. Wehausen and O.J. Sibul), Schiffstechnik, Vol. 26, Nov. 1979, pp. 179-200.
37. "Mooring Loads", Recent Developments in Ocean Engineering, collection of preprints, from U.C. Extension's intensive four-day course, 24-27 Feb. 1981.
38. "The Statistical Description of the Local Motions Onboard a Ship Proceeding into a Short-crested Seaway", (with R.W. Trudell), American Society of Civil Engineers, Directional Wave Spectra Applications Symposium, U.C. Berkeley, 14-16 Sept. 1981.
39. "The Determination of the Directional Seaway from the Motions of a Ship", (with J.T. Dillingham), American Society of Civil Engineers, Directional Wave Spectra Applications Symposium, U.C. Berkeley, 14-16 Sept. 1981.
40. "Ships Moving in the Transcritical Range", (with D.B. Huang, O.J. Sibul, J.V. Wehausen, D.M. Wu, T.Y. Wu), Proceedings of the 11th Methodological Seminar on Ship Hydrodynamics, Vol. 2, Varna, Bulgaria, Nov. 1982.
41. "Wave Energy Absorption by a Permeable Ship" (with G. Nihous). Proc. Int'l. Workshop on Ship and Platform Motions, UCB, Oct. 1983.
42. "Ship Collisions with Bridges: The Nature of Accidents, Their Prevention and Mitigation", (co-author), Nat'l. Research Council, Marine Board, Nov. 1983.

43. "Ship Generated Solitons", (with R.C. Ertekin and J.V. Wehausen) 15th Symposium on Naval Hydrodynamics, National Academy of Sciences, Hamburg, West Germany, Sept. 1984.
44. "Waves Caused by a Moving Disturbance in a Shallow Channel of Finite Width", (with R.C. Ertekin and J.V. Wehausen) J. Fluid Mech., vol. 169, pp. 275-292, August 1986.
45. "A Consistent, Large-Amplitude Analysis of the Coupled Response of a TLP and Tendon System" (with J. R. Paulling), Proceedings of the Fifth OMAE Conference, Tokyo, April 1986.
46. "Measurement of the Forces on a Slightly Submerged Cylinder", (with S.B. Hodges), American Towing Tank Conference, New Orleans, August 1986.
47. Annual Report, Marine Board (W.C. Webster, editor), National Academy Press, Feb. 1987.
48. Sixteenth Symposium on Naval Hydrodynamics, Proceedings of Conference held in Berkeley, 1986. National Academy Press, pp. 613, June 1987.
49. Ocean Engineering Research Needs, (with R.J. Seymour), Institute of Marine Resources Report 87-5, September 1987.
50. Annual Report, Marine Board (W.C. Webster, editor), National Acad. Press, Feb. 1988.
51. "A Use of Graphics Workstations in Marine Container Terminals", Proceedings of United States/Japan Natural Resources Conference, May 1988.
52. "Consequence Analysis of TLP Tether Failure", (with T. Moan), Proceedings, BOSS'88, Tapir Publishers, Trondheim, Norway, June 1988.
53. "Prediction and Measurement of the Performance of Free Flooding Ship Antirolling Tanks", (with J.F. Dalzell and R.F. Barr), SNAME Transactions, vol. 96, New York, 1988.
54. "On Direct Methods in Water Wave Theory", (with J.J. Shields), J. Fluid Mech., vol. 197, pp. 171-199, Dec. 1988.
55. "Conservation Of Mechanical Energy And Circulation In The Theory Of Inviscid Fluid Sheets", (with J.J. Shields), J. Engg. Math. 23, 1-15, January 1989.
56. "Motions in Waves", (with R.F. Beck, W. F. Cummins, J.F. Dalzell, P. Mandel) Principles of Naval Architecture, Volume III, SNAME, N.Y., pp 1-188, November 1989.
57. "Applications of High-Level, Green-Naghdi theory to Fluid Flow Problems" (with J.J. Shields), IUTAM Symposium on Marine Dynamics, Brunel University, London, June 1990.
58. "The Dispersion of Large Amplitude Gravity Waves in Deep Water" (with D.-Y. Kim), 18th Symposium on Naval Hydrodynamics, Ann Arbor MI, August 1990.
59. "The Health of the U. S. Skill and Technology Base in Maritime Transportation", Marine Technical Society Annual Meeting, September 1990.
60. "The Motions of Large Floating Flexible Structures" (with M. ben Hamida), The First Symposium on Large Floating Structures, VLFS'91, Honolulu, HI, April 1991.

61. "Considerations for the Design of Floating Airports", United States - Japan Natural Resources Marine Facilities Panel Conference, Tokyo, Japan, May 1991.
62. "Shiphandling Simulation for Waterway Design" (Chairman of NRC Marine Board panel which produced this report and editor of the report), National Academy Press, 1992 (Library of Congress Catalog Card Number 92-60999).
63. "Application of the Green-Naghdi Theory of Fluid Sheets to Shallow-Water Wave Problems" (with Z. Demirbilek). U.S. Army Corps of Engineers, Vicksburg, Mississippi, Technical Report CERC-92-11, 45 pp., Sept. 1992.
64. "Users Manual and Examples for GNWAVE" (with Z. Demirbilek). U.S. Army Corps of Engineers, Vicksburg, Mississippi, Technical Report CERC-92-13, 23 pp. + Appendix, 32 pp., Sept. 1992.
65. "Evolution of Time-Dependent Nonlinear Shallow-Water Waves" (with Z. Demirbilek). Advances in Hydro-Science and -Engineering, Vol. I, Part B (S. S.-Y. Wang editor), The University of Mississippi, pp. 1536-1544, June 1993.
66. "Marine Board Shiphandling Research" (with Cdr. Wayne Young). MARSIM '93, Institute of Marine Dynamics, National Research Council of Canada, St. Johns, Newfoundland, September 1993.
67. "The Proceedings of the 20th International Towing Tank, Vols. I & II" (editor), The University of California, Vol. I - June 1993, Vol II - March 1994.
68. "A Preliminary to the Physical Modeling of a Floating Airport" (with S.-W. Lee), Hydroelasticity '94, Trondheim, Norway, May 1994.
69. "The Motions Performance of a Mat-Like Floating Airport" (with P. Mamidipudi), Hydroelasticity '94, Trondheim, Norway, May 1994.
70. "Bragg Scattering of Water Waves by Green-Naghdi Theory" (with J. V. Wehausen), Z. angew. Math Phys 46 Special Issue (1995).
71. "Mooring-Induced Damping", Ocean Engineering, Vol. 22, No. 6, pp.571-591, 1995.
72. "A numerical computation of capillary-gravity waves in deep water" (with J.-W. Kim). Workshop on Water Waves and Floating Bodies, Hamburg, Germany, 1996.
73. "GTS-Evaluation Report for Danish Maritime Institute" (Chair of committee and principal author), prepared for the Danish Agency for Development of trade and Industry, Ministry of Business and Industry, August 1996, 66pp. (Confidential)
74. "The drag of an airplane taking off from a floating runway" (with J.-W. Kim). 2nd International Symposium on Very Large Floating Structures, Yokohama, Japan, Nov. 1996. (Accepted for publication in the Journal of Marine Science).
75. "The dynamics of falling marine chain: a continuum model", Journal of Offshore Mechanics and Arctic Engineering, Vol. 120, No. 1, February 1998, Published by ASME.
76. "The dynamics of falling chain: a rigid link model" (with W. Ma). OMAE Symposium, Yokohama, Japan, April 1997.

77. "A Waterfall Springing from Unsteady Flow over an Uneven Bottom" (with X. Zhang). Workshop on Water Waves and Floating Bodies, Alphen aan den Rijn, The Netherlands, April 1998.
78. "Optimal Structure for Large-Scale Floating Runways". Hydroelasticity '98 Conference in Fukuoka, Japan, Dec 1-3, 1998.
79. "Optimal Thruster Allocation" (with J. Sousa). ISOPE Conference, Brest, France. May 29 – June 4, 1999.
80. "Design and Characterization of a Small-Scale Azimuthing Thruster for a M.O.B. Module" (with S. Spry and D. Empey), VLFS '99 Conference, Honolulu, HI, Sept. 1999.
81. "Optimization of the Strength Distribution of a Model of a Large-Scale Floating Runway" (with J. Ma), VLFS '99 Conference, Honolulu, HI, Sept. 1999
82. "Mobile Offshore Base (MOB), Some Structural Considerations" Invited Lecture, International Ship Structures Congress Symposium, Tokyo, Japan, October 2000
83. "Hydroelastic Analysis of a Floating Runway with Inhomogeneous Structural Properties", Workshop on Water Waves & Floating Bodies, Hiroshima, Japan, April 2001
84. "A Ship Maneuvering Control Framework" (with J. Sousa, A. Girard, K. Hedrick), 20th International Conference on Offshore Mechanics & Arctic Engineering, Rio de Janeiro, June, 2001.
85. "Simulation Environment Design and Implementation, An Application to the Mobile Offshore Base" (with A. Girard, J. Sousa, K. Hedrick), 20th International Conference on Offshore Mechanics & Arctic Engineering, Rio de Janeiro, June, 2001.
86. "The Computation of the Motions of Large, Barge-Like Floating Structures Using Flat, Fifth-Order Source Panels" (with J. Ma), 4th Very Large Floating Structures Symposium, Tokyo, Japan, Jan 2003.
87. "A Strongly Nonlinear Model for Water Waves in Water of Variable Depth – The Irrotational Green-Naghdi Model" (with J.W. Kim, K. J. Bai, and R.C. Ertekin). Journal of Offshore Mechanics & Arctic Engineering, February 2003, Vol. 125, pp. 25-32, Feb. 2003
88. "Simulation of Characteristics of Tuned Liquid Column Damper Using a Potential-flow Method"(with P. Chaiviriyawong, T. Pinkaew and P. Lukkunaprasit). Accepted for publication in the Journal of Engineering Structures, 2006.