CURRICULUM VITAE

Richard K. Miller

CURRENT TITLE

President (and first employee)
Professor of Mechanical Engineering

ADDRESS

Franklin W. Olin College of Engineering
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PERSONAL

Birth date: June 12, 1949 Birthplace: Fresno, CA USA
Family: Married (1971), 2 children

EDUCATION

California Institute of Technology
Ph.D., Applied Mechanics, 1976

Massachusetts Institute of Technology
M.S., Mechanical Engineering, 1972

University of California, Davis
B.S., Aerospace Engineering, 1971 (Highest Honors)

ACADEMIC POSITIONS

FRANKLIN W. OLIN COLLEGE OF ENGINEERING

1999-Present	President (and first employee)
1999-Present	Professor of Mechanical Engineering

UNIVERSITY OF IOWA

1992-1999	Dean, College of Engineering
1992-1999	Professor of Civil and Environmental Engineering

UNIVERSITY OF SOUTHERN CALIFORNIA

1989-1992	Associate Dean of Engineering (Academic Affairs)
1985-1992	Professor of Civil Engineering and of Aerospace Engineering
1984-1985	Associate Professor of Civil Engineering and of Aerospace Engineering
1982-1984	Associate Professor and Administrative Officer of Civil Engineering
1979-1982	Associate Professor of Civil Engineering

UNIVERSITY OF CALIFORNIA, SANTA BARBARA

July 1, 1979	Declined promotion to Associate Professor with tenure to accept position at USC
Jan, 1976-1979	Assistant Professor of Mechanical and Environmental Engineering
Sep-Dec, 1975	Acting Assistant Professor of Mechanical and Environmental Engineering

SELECTED RECENT PROFESSIONAL ACTIVITIES

ASSOCIATION OF INDEPENDENT COLLEGES AND UNIVERSITIES OF MASSACHUSETTS
Member (2006 – Present; Executive Committee, 2006 – 2009)

ASSOCIATION OF INDEPENDENT TECHNOLOGICAL UNIVERSITIES
Member (1999 – Present; Chair, 2007 – 2009; Past Chair 2009 – 2010)

BABSON COLLEGE, Babson Park, MA
Board of Trustees (Member, 2001 – Present)

CALIFORNIA POLYTECHNIC STATE UNIVERSITY, SAN LUIS OBISPO
College of Engineering Dean's Advisory Committee (Member, 2006 – Present)

COUNCIL ON COMPETITIVENESS, Washington, DC
Member (2005 – 2008)

COUNCIL ON FOREIGN RELATIONS, New York, NY
Higher Education Working Group on Global Affairs (Member, 2007 – Present)

FRANKLIN W. OLIN COLLEGE OF ENGINEERING, Needham, MA
Board of Trustees (Member, 1999 – Present)

HARVARD UNIVERSITY, Cambridge, MA
Visiting Committee for the School of Engineering and Applied Sciences
(Member, 2007 – Present)

NATIONAL ACADEMY OF ENGINEERING, Washington, DC
Frontiers of Engineering Education, Steering Committee (Member 2009)
Lifelong Learning Imperative Working Group (Member, 2009)
Changing the Conversation Working Group (Member, 2010)

NATIONAL SCIENCE FOUNDATION, Washington, DC
Engineering Advisory Committee (Member, 2002 – 2008; Chair, 2006 – 2007)

STANLEY CONSULTANTS, INC., Muscatine, IA
Board of Directors (2001 – Present)

SUZUKI ASSOCIATION OF THE AMERICAS, Boulder, CO
Honorary Board (Member, 2008 – Present)

UNIVERSITY OF CALIFORNIA, DAVIS
Advisory Board, Department of Mechanical and Aeronautical Engineering
(Member, 2000 – 2006)
Advisory Board, Department of Civil and Environmental Engineering
(Member, 1995 – 1998)

UNIVERSITY OF IOWA, Iowa City, IA
Advisory Board, IIHR Hydroscience and Engineering (Member, 2000 – 2005)

AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS, MEMBER
AMERICAN SOCIETY OF CIVIL ENGINEERS, MEMBER
AMERICAN SOCIETY FOR ENGINEERING EDUCATION, MEMBER
AMERICAN SOCIETY OF MECHANICAL ENGINEERS, MEMBER

HONORS

Member of Sigma Xi, Tau Beta Pi, Phi Kappa Phi Honor Societies
Recipient of Earl C. Anthony Fellowship, ARCS Foundation Fellowship, and NSF Traineeships

Listed in American Men and Women of Science
Listed in Who's Who in Frontier Science and Technology
Listed in Who's Who in Science and Engineering
Listed in Who's Who in America
Listed in Who's Who in the World

AWARDS

- "Richard K. Miller Scholarships" and "Richard K. Miller Summer Fellowships" (about a dozen in total) at Olin College, Needham, MA, established by action of the Board of Trustees in May 2009 through generous donations "*in recognition of ten years of outstanding leadership of Olin College*." (The scholarships provide need-based financial aid for deserving first-year students, and the summer fellowships provide summer support for pairs of continuing students and their faculty mentors.)

- 2006 All-Star Award, *Mass High Tech, The Journal of New England High Technology*, for leading the establishment of Olin College, presented October 25, 2006, Boston, MA.

- "Legacy of Iowa Engineering" award, University of Iowa, College of Engineering, Iowa City, IA, for making "*exceptional historical contributions toward advancing the College in teaching, research, or service*" while associated with the College, presented June 10, 2006 (11th person—and the second living person—to receive this award).

- The 2002 Distinguished Engineering Alumnus Award, College of Engineering, University of California, Davis, presented at Commencement Ceremonies on June 14, 2002 (12th person to receive this award in the history of the College of Engineering).

- The 2002 Citation for Excellence, Cal Aggie Alumni Association, University of California, Davis, presented at a reception at the College of Engineering on June 14, 2002, and acknowledged at a university-wide dinner on October 19, 2002, on Homecoming Weekend.

- "Richard K. Miller Engineering Entrepreneurial Studies Scholarship," established January 29, 1999, by the President of the University of Iowa, through generous endowment support provided by the Engineering Development Council in recognition of "*extraordinary contribution to the College of Engineering.*" This perpetual scholarship fund supports tuition for deserving undergraduate engineering students each year.

- Tau Beta Pi Certificate of Recognition "*for outstanding service and dedication to the University of Iowa, College of Engineering*," April 21, 1994.

- TRW Excellence in Teaching Award, USC School of Engineering, presented in May, 1987, at the annual faculty meeting of the School of Engineering, University of Southern California, Los Angeles (the award provided a $4,000 prize from the TRW Corporation).

- David M. Wilson Associates "Outstanding Undergraduate Teaching Award in Civil Engineering," presented in May 1983, by the Graduating Class of Civil Engineers at the University of Southern California, Los Angeles.

- David M. Wilson Associates "Outstanding Civil Engineering Faculty Member" award, presented in May, 1981, by the Graduating Class of Civil Engineers at the University of Southern California, Los Angeles.

- Pi Tau Sigma (precursor to Tau Beta Pi) "Most Appreciated Faculty Member" award, presented at Commencement ceremonies in June, 1980, by the Graduating Class of Mechanical Engineers at the University of California, Santa Barbara.

- "Outstanding Instructor" award, presented in May, 1978, by the student chapter of ASME at the University of California, Santa Barbara.

SELECTED RECENT KEYNOTE AND INVITED PRESENTATIONS

- "*Engineering, Liberal Arts, and the Educational Challenges of the Grand Challenges*," R.K. Miller (Invited presentation), Wellesley Women: Navigating a Complex World, Business Leadership Council Annual Meeting, Wellesley College, Wellesley, MA, November 13, 2010.

- "*From the Ground Up: Reinventing Engineering Education for the 21st Century*," R.K. Miller and I. Adesida (Invited presentation), Tradition, Innovation, and Creativity: Undergraduate Learning for the 21st Century, The Reinvention Center, Crystal City, VA, November 12, 2010.

- "*From the Ground Up: Rethinking Engineering Education for the 21st Century*," R.K. Miller (Invited presentation), Nanyang Technological University, Singapore, October 20, 2010.

- "*The Educational Imperatives of the Engineering Grand Challenges*," R.K. Miller (Keynote Address), ASEE Global Colloquium on Engineering Education, Sinpagore, October 19, 2010.

- "*Advantages of Innovative Approaches to Curriculum Development*," R.K. Miller (Invited presentation), Educating Engineering Leaders Conference, Imperial College London, London, UK, September 9, 2010.

- "*From the Ground Up: Rethinking Engineering Education for the 21st Century*," R.K. Miller (Keynote Address), 2010 Symposium on Engineering and Liberal Education, Union College, Schenectady, NY, June 4, 2010.

- "*Starting Over in Engineering Education: The Creation of Olin College*," R.K. Miller (Invited presentation), Reinventing the American University, American Enterprise Institute, Washington, DC, June 3, 2010.

- *"How Does Engineering Differ from Science?,"* R.K. Miller, (Keynote presentation), Chicago Symposium, Excellence in Teaching Mathematics and Science: Research and Practice, Northwestern University, Evanston, IL, March 26, 2010.

- *"Innovative Educational and Pedagogical Approaches,"* R.K. Miller, (Invited presentation), Transforming Tertiary Education for Innovation and Competitiveness, World Bank, Washington, DC, March 25, 2010.

- "*What Does Every Engineer Need to Know in the 21st Century?,"* R.K. Miller, Dean's Distinguished Lecture, College of Engineering, University of California, Davis, January 28, 2010.

- "*Building an Educational Experience for Gen Y Engineers*," R.K. Miller, (Education Keynote Address), Autodesk University, Las Vegas, NV, December 1, 2009.

- "*Olin College: Reflections on Ten Years of Experimentation in Engineering Education*," R.K. Miller, MacVicar Lecture on Education, Massachusetts Institute of Technology, Cambridge, MA, November 20, 2009.

- "*Enhancing Student Engagement Through Creative Design, Entrepreneurial Thinking, and Project-Based Learning*," R.K. Miller, (Invited presentation), Global Human Resources Forum 2009—Creative Education for All, Seoul, Korea, November 4, 2009.

- "*What Does Every Engineer Need to Know—Now?,"* R.K. Miller, (Keynote presentation), Annual Eberhardt Rechtin Lecture, Daniel J. Epstein Department of Industrial and Systems Engineering, Viterbi School of Engineering, University of Southern California, Los Angeles, CA, September 24, 2009.

- "*Creating an Innovative Engineering College from Scratch: Lessons Learned*," R.K. Miller, (Invited presentation), 2009 World Conference on Higher Education, Panel on World Class Universities and Innovative Tertiary Education Institutions, UNESCO, Paris, France, July 7, 2009.

- "*How Can We Best Prepare the Next Generation of Engineering Innovators?,"* R.K. Miller, (Keynote address), 2009 Joint ASCE-ASME-SES Conference on Mechanics and Materials, Virginia Tech, Blacksburg, VA, June 26, 2009.

- "*From Concept to Reality: Designing an Independent College Devoted Solely to Engineering—Reflections on the First Ten Years*," R.K. Miller, (Invited presentation), Engineering Education in the 21st Century (pre-conference workshop), 2009 NSF CMMI Engineering Research and Innovation Conference, Honolulu, HI, June 22, 2009.

- "*The National Academy of Engineering Grand Challenges and the Role of Civil Engineering*," R.K. Miller, (Invited presentation), 2009 ASCE Annual Civil Engineering Department Heads Conference, Portland, OR, May 26-28, 2009.

- "*Creating an Innovative Engineering College from Scratch: Lessons Learned*," R.K. Miller, (Invited presentation), Knowledge Economy Forum VIII—Reforming Innovation Systems: Moving Beyond Lectures and Labs, INSEAD, Fontainebleau, France, April 28-May 1, 2009.

- "*From Concept to Reality: Some Challenges in Establishing Olin College*," R.K. Miller, (Invited presentation), Kazakhstan-World Bank Joint Economic Research Program (JERP), Workshop on Strategy for the New University of Astana, Ministry of Education and Science, Astana, Republic of Kazakhstan, December 16, 2008.

- "*Educating Engineering Leaders for the 21st Century*," R.K. Miller, (Keynote address), Annual H.T. Person Memorial Lecture, College of Engineering and Applied Science, University of Wyoming, Laramie, WY, October 10, 2008.

- "*On Becoming a Leader: Lessons from an Academic Start-Up*," R.K. Miller, (Invited presentation), Graduate Seminar, Department of Mechanical and Industrial Engineering, University of Iowa, Iowa City, IA, September 25, 2008.

- "*BEYOND RESEARCH: Are Our Universities Doing the Best Job of Producing Real Engineering Innovators?,"* R.K. Miller, (Invited plenary presentation), Ahmed M. Abdel-Ghaffar Memorial Symposium, Advances in Structural Dynamics and Earthquake Engineering, University of Southern California, Los Angeles, CA, September 19, 2008.

- "*The New Liberal Education*," R.K. Miller, (Invited plenary address), 2008 Baker Forum: What Does it Mean to be a Polytechnic University in the 21st Century?, California Polytechnic State University, San Luis Obispo, CA, May 5, 2008.

- "*Reinventing Engineering Education*," R.K. Miller, (Invited plenary presentation), 2008 Global Management of Technology Forum, Seoul, Korea, January 30, 2008.

EDUCATIONAL CONSULTING

BABSON COLLEGE, Wellesley, MA
- Presidential Search Committee, Member (2001 – 2002)

KAUFFMAN CENTER FOR ENTREPRENEURIAL LEADERSHIP, Kansas City, MO
- Futures 21 Brain Trust, Member (2001)

NATIONAL FOUNDATION FOR TEACHING ENTREPRENEURSHIP, New York, NY
- Curriculum and Educational Policy Working Group, Member (2001 – Present)

NEW ENGLAND ASSOCIATION OF SCHOOLS AND COLLEGES
- Vice-Chair, Visiting Committee, General Accreditation Review, New England Conservatory (of Music), Boston, MA (2009)
- Chair, Visiting Committee, General Accreditation Review, U.S. Coast Guard Academy, New London, CT (2009 – 2010)

STATE OF LOUISIANA, BOARD OF REGENTS, Baton Rouge, LA
- Chair, External Review Committee, proposed Ph.D. in Engineering, and proposed M.S. in Engineering Management, Louisiana Tech University, Ruston, LA, (1998)

UNIVERSITY OF ILLINOIS, SPRINGFIELD, IL, October 1999
- "Fund Raising Concepts for Deans," Workshop for all Vice Presidents and Deans, (organizer and presenter)

UNIVERSITY OF SOUTHERN CALIFORNIA, Los Angeles, CA
- Chair, External Review Committee, Aerospace Engineering Department, (1995)

WESTERN ASSOCIATION OF SCHOOLS AND COLLEGES
- Chair, Visiting Committee, General Accreditation Review, Harvey Mudd College, Claremont, CA, (1999)

WORLD BANK, Tertiary Education Division, Washington, DC
- Short-term Consultant, and guest speaker on establishment of "world class universities" (including the Joint Educational Research Project with the Republic of Kazakhstan to establish the New University of Astana) (2008)

ADMINISTRATIVE SERVICE

FRANKLIN W. OLIN COLLEGE OF ENGINEERING
- Chief Executive Officer of Olin College (1999 – Present)
- Search Committees for Provost, Vice President for Innovation and Research, Vice President for Administration and Finance, and Vice President for External Relations and Enrollment (Chair, 1999)
- Leadership Team and Strategic Planning Committee (Chair, 1999 – Present)
- Campus Master Planning and Facilities Development Team (co-Chair, 1999 – 2002)

- "Invention 2000" team for discovery, invention, development, and test of all aspects of Academic Program, Student Life, Policies and Procedures, Finance and Administration, External Relations, Admissions and Development, and College Governance (Chair, 2000 – 2002)
- Search Committee for Vice President for Development, (Chair, 2002 – 2003; and 2007 – 2008)
- President's Cabinet (Chair, 2005 – Present)

UNIVERSITY OF IOWA

University-wide Service

- Search Committee, Executive Director, University of Iowa Alumni Association (1994-95)
- Search Committee, Provost (1996)
- Search Committee, President, University of Iowa Foundation (1997-98)
- Interdisciplinary Strategic Planning Committee (1998-1999)
- Search Committee, Dean, College of Education (1998-1999)

College of Engineering Service

- Dean of the College of Engineering (1992-1999)

UNIVERSITY OF SOUTHERN CALIFORNIA

University-wide Service

- Faculty Senate (1985-89)
- Steering Committee, President's Commission on Undergraduate Education (CUE) (1988-90)
- CUE Sub commission on General Education (1988-90)
- Task Force on English Language Training for Science and Engineering Graduate Students, Co-Chair (1990-1991)
- Advisory Board, Center for Excellence in Teaching, (1990 - 1992)
- General Education Committee, (1990 - 1992)
- Non-Resident Faculty Fellow, Troy Hall (1990 - 1992)
- Undergraduate Residential College Steering Committee (1992)
- University Honors College Steering Committee (1992)

School of Engineering Service

- Associate Dean for Academic Affairs (1989 - 1992)
- Undergraduate Education Committee; Chair (1988 - 1990)
- Curriculum Committee (1979 - 89); Chair (1986 - 89)
- Powell Fellowship Committee (1986 - 88); Chair (1987 - 88)
- Powell Research Grant Committee (1987 - 88)
- TRW Teaching Award Committee (1987 - 88)
- Appointments, Promotions, and Tenure Committee (1987 - 89)
- Academic Planning and Budget Advisory Committee (1985 - 87); Co-Chair (1989 - 1992)
- Search Committee for Dean of the School (1983 - 84)

Department of Civil Engineering

- Administrative Officer (1982 - 84)
- Search Committee for Chairman of the Department (1983 - 84)
- Search Committee for New Faculty; Chair (1985 - 86)
- Program Advisor for Applied Mechanics (1982 - 1992)
- Curriculum Committee (1979 - 92); Chair (1983 - 88)
- Office and Laboratory Space Allocation Committee (1986 - 88)
- Salary Review Board (1981 - 82; 1988 - 89); Chair (1988 - 89)

- Faculty Academic Development and Promotion Review Committee; Chair (1988 - 89)
- Student Affairs Committee (1980 - 81)
- Ph.D. Screening Exam Committee; Chair (1981 - 82)
- Teaching Assistant Committee (1988 - 1992)

Department of Aerospace Engineering
- Aerospace Structures Program Committee; Chair (1985 - 1992)

UNIVERSITY OF CALIFORNIA, SANTA BARBARA

University-wide Service
- Campus Seismic Review Committee (1976 - 79)
- Graduate Council of the Academic Senate (1978 - 79)

College of Engineering Service
- Executive Committee (1976 - 78)

Department of Mechanical and Environmental Engineering
- Graduate Advisor (1977 - 78)
- Curriculum Committee (1976 - 77)
- Liaison Committee on Computers (1975 - 77)
- Committee on Laboratory Equipment (1975 - 76)

BOOK CHAPTERS

"Response of Hysteretic Oscillators Under Non-Stationary Random Excitation," R.K. Miller, S.F. Masri, H. Sassi, and T.K. Caughey, pp. 241-265 in *Studies in Applied Mechanics 14: Random Vibration - Status and Recent Developments, the Stephen Harry Crandall Festschrift*, edited by I. Elishakoff and R.H. Lyon, Elsevier, New York (1986).

"Olin College and the Future of Engineering," R.K. Miller, in *Writing and Reading Across the Curriculum*, 11th Edition, by Laurence Behrens and Leonard Rosen, Pearson Longman, New York (January 2010).

Forward, R.K. Miller, in *Holistic Engineering Education: Beyond Technology*, 1st edition, by Domenico Grasso and Melody Brown Burkins, Eds., Springer, (2010).

"Some Challenges of Creating an Entirely New Academic Institution," R.K. Miller, Chapter 7 in *Organizational Learning Contracts*, by Paul Goodman, Oxford University Press (2010, to appear).

PUBLICATIONS

1. "The Acceleration Response of Tall Buildings with Limited Slip Foundations," R.K. Miller, M.S. Thesis, Department of Mechanical Engineering, Massachusetts Institute of Technology, Cambridge, MA, August, 1972.

2. "Experiment to Determine the Vibration Characteristics of a Low Tuned Concrete Turbine Generator Pedestal," K.L. Benuska and R.K. Miller, Report No. KMI 2027, Kinemetrics, Inc., Pasadena, CA, December 1973, 68 pp.

3. "The Steady-State Response of Multidegree-of-Freedom Systems with a Spatially Localized Nonlinearity," R.K. Miller, Ph.D. Dissertation and Report No. EERL 75-03, Earthquake

Engineering Research Laboratory, California Institute of Technology, Pasadena, CA, October 1, 1975, 193 pp.

4. "The Steady-State Response of Systems with a Spatially Localized Nonlinearity," W.D. Iwan and R.K. Miller, *International Journal of Nonlinear Mechanics*, Vol. 12, pp. 165-173 (1977).

5. "An Approximate Method of Analysis of the Transmission of Elastic Waves Through a Frictional Boundary," R.K. Miller, *Journal of Applied Mechanics, ASME*, Vol. 44, pp. 652-656 (1977).

6. "Properties of the Steady-State Response of Locally Nonlinear Systems," R.K. Miller, *Proceedings of the Sixth Canadian Congress of Applied Mechanics*, May 30-June 3, 1977, University of British Columbia, Vancouver, BC, Vol. 1, pp. 445-446.

7. "The Peak Harmonic Response of Locally Nonlinear Systems," R.K. Miller and W.D. Iwan, *Earthquake Engineering and Structural Dynamics*, Vol. 4, pp. 79-87 (1978).

8. "The Steady-State Response of Systems with Hardening Hysteresis," R.K. Miller, *Journal of Mechanical Design, ASME*, Vol. 100, pp. 193-198 (1978).

9. "The Effects of Boundary Friction on the Propagation of Elastic Waves," R.K. Miller, *Bulletin of the Seismological Society of America*, Vol. 68, pp. 987-998 (1978).

10. "Engineering Features of the Santa Barbara Earthquake of August 13, 1978," R.K. Miller and S.F. Felszeghy, Report No. UCSB-ME-78-2, Earthquake Engineering Research Institute, Berkeley, CA, December, 1978, 132 pp.

11. "The Propagation of Elastic Waves Through a Slipping Interface," R.K. Miller, *Eighth U.S. National Congress of Applied Mechanics*, June 26-30, 1978, University of California, Los Angeles, CA, Abstracts and Schedule, p. 11.

12. "The Buckling of Lattice Columns with Stochastic Imperfections," R.K. Miller and J.M. Hedgepeth, *International Journal of Solids and Structures*, Vol. 15, pp. 73-84 (1979).

13. "An Estimate of the Properties of Love-type Surface Waves in A Frictionally Bonded Layer," R.K. Miller, *Bulletin of the Seismological Society of America*, Vol. 69, pp. 305-317 (1979).

14. "Reflection, Refraction and Absorption of Elastic Waves at a Frictional Interface: SH Motion," R.K. Miller and H.T. Tran, *Journal of Applied Mechanics*, ASME, Vol. 46, pp. 625-630 (1979).

15. "The Santa Barbara Earthquake of August 13, 1978," R.K. Miller, *Earthquake Engineering and Structural Dynamics*, Vol. 7, pp. 491-506 (1979).

16. "The Effects of Dry Friction and Slippage Between Layers on Love-type Surface Waves," R.K. Miller, *Proceedings of the Seventh Canadian Congress of Applied Mechanics*, May 27-June 1, 1979, Universite de Sherbrooke, Sherbrooke, Quebec, Vol. 1, pp. 262-264.

17. "Steady Vibroimpact at a Seismic Joint Between Adjacent Structures," R.K. Miller, *Proceedings of the Seventh World Conference on Earthquake Engineering*, Sept. 8-13, 1980, Istanbul, Turkey, Vol. 6, pp. 57-64 (1980).

18. "Computational Aspects of Periodic Structures: An Introduction and a Survey," R.K. Miller, Report No. CE 80-05, Department of Civil Engineering, University of Southern California, Los Angeles, CA, September, 1980, 30 pp.

19. "Selection and Design of an Attitude Control System for a Large Solar Reflector Spacecraft," R.K. Miller, J.M. Hedgepeth, and K. Knapp, Report No. ARC-TN-1090, Astro Research Corporation, Carpinteria, CA, 13 October 1980, 48 pp.
20. "Design of a Solar-Reflector Spacecraft," K. Knapp, J.M. Hedgepeth, and R.K. Miller, Report No. ARC-TN-1091, Astro Research Corporation, Carpinteria, CA, 17 October 1980, 99 pp.

21. "Design Studies for Large Free-Flying Solar-Reflector Spacecraft," J.M. Hedgepeth, R.K. Miller, and K. Knapp, Report No. ARC-R-1015, Astro Research Corporation, Carpinteria, CA, 17 October 1980, 99 pp.

22. "Reflection, Refraction and Absorption of Elastic Waves at a Frictional Interface: P and SV Motion," R.K. Miller and H.T. Tran, *Journal of Applied Mechanics, ASME*, Vol. 48, pp. 155-160 (1981).

23. "Structural Concepts for Ultralightweight Spacecraft," R.K. Miller, L.R. Adams, and J.M. Hedgepeth, Report No. ARC-TN-1104, Astro Research Corporation, Carpinteria, CA, 1 June 1981, 55 pp.

24. "Conceptual Design Studies for Large Free-Flying Solar-Reflector Spacecraft," J.M. Hedgepeth, R.K. Miller, and K. Knapp, NASA CR-3438, June 1981, 110 pp.

25. "Stochastic SH Waves Along a Frictional Interface," R.K. Miller, *Journal of the Engineering Mechanics Division, Proc. ASCE*, Vol. 108, No. EM6, pp. 1262-1276 (1982).

26. "An Algorithm for the Finite Element Analysis of Partly Wrinkled Membranes," R.K. Miller and J.M. Hedgepeth, *AIAA Journal*, Vol. 20, No. 12, pp. 1761-1763 (1982).

27. "Compact Probabilistic Representation of Random Processes," S.F. Masri and R.K. Miller, *Journal of Applied Mechanics, ASME*, Vol. 49, No. 4, pp. 871-876 (1982).

28. "Further Study of Alternate Support Structure Concepts for the Radarsat Antenna," J.M. Hedgepeth, R.E. Lagerquist, K. Knapp, and R.K. Miller, Report No. ARC-TN-1110, Astro Research Corporation, Carpinteria, CA, 31 March 1982, 33 pp.

29. "Compact Probabilistic Representation of Random Processes," S.F. Masri and R.K. Miller, Report No. CE 82-02, Department of Civil Engineering, University of Southern California, Los Angeles, CA, March 1982, 36 pp.

30. "Final Report - A Study of Structural Concepts for Ultralightweight Spacecraft," J.M. Hedgepeth and R.K. Miller, Report No. ARC-TN-1114, Astro Research Corporation, Carpinteria, CA, July 1982, 73 pp.

31. "Elastic Stability of an Inflated Isotensoid Column," R.K. Miller and J.M. Hedgepeth, *Proceedings of the Ninth U.S. National Congress of Applied Mechanics*, Cornell University, Ithaca, NY, June 21-25, 1982.

32. "Orthogonal Decomposition of Earthquake Processes," D.E. Hudson, S.F. Masri, and R.K. Miller, *Proceedings of the Ninth U.S. National Congress of Applied Mechanics*, Cornell University, Ithaca, NY, June 21-25, 1982.

33. "An Efficient Technique for the Approximate Analysis of Vibro-Impact," R.K. Miller and B. Fatemi, *Journal of Vibration, Acoustics, Stress, and Reliability in Design*, *ASME,* Vol. 105, No. 3, pp. 332-336 (1983).

34. "An Analytical and Experimental Study into the Stability and Control of Nonlinear Flexible Structures," T.J. Dehghanyar, S.F. Masri, R.K. Miller, G.A. Bekey, and T.K. Caughey, *Proceedings of the Fourth VPI and SU/AIAA Symposium on Dynamics and Control of Large Structures*, June 6-8, 1983, Virginia Polytechnic Institute and State University, Blacksburg, VA, pp. 291-310.
35. "Geometric Studies of the Precision of Doubly Curved Reflector Surfaces Supported by Sequentially Deployed Trusses," R.K. Miller and J.M. Hedgepeth, Report No. ARC-TN-1118, Astro Research Corporation, Carpinteria, CA, 14 October 1982, 23 pp. (Final Report, 24 August 1983, 70 pp.)

36. "Finite Element Analysis of Wrinkling Membranes," R.K. Miller, J.M. Hedgepeth, V.I. Weingarten, P. Das, and S. Kahyai, Report No. USC-CE-8305, Department of Civil Engineering, University of Southern California, Los Angeles, CA, 30 June 1983, 80 pp.

37. "A Method for Reducing the Order of Nonlinear Dynamic Systems," S.F. Masri, R.K. Miller, H. Sassi, and T.K. Caughey, Report No. USC-CE-8307, Department of Civil Engineering, University of Southern California, Los Angeles, CA, August 1983, 66 pp.

38. "Final Report - A Study of Structural Concepts for Ultralightweight Spacecraft," R.K. Miller, K. Knapp, and J.M. Hedgepeth, Report No. ARC-TN-1127, Astro Research Corporation, Carpinteria, CA, 15 November, 1983, 84 pp.

39. "Astromast Design Analysis," J.M. Hedgepeth, R.K. Miller, and K. Knapp, Report No. ARC-TN-1129, Astro Research Corporation, Carpinteria, CA, 16 December, 1983, 8 pp.

40. "Time Domain Analysis of a Nonlinear System with Limited Slip," S.F. Masri, R.K. Miller, H. Sassi, and T.K. Caughey, Report No. USC-CE-8300, Department of Civil Engineering, University of Southern California, Los Angeles, CA, December 1983.

41. "A Resonance-Based Linearization Approach for Efficient Analysis of Severely Nonlinear Oscillations," R.K. Miller and M.A. Heidari, *Developments in Mechanics, Vol. 12, Proceedings of the Eighteenth Midwestern Mechanics Conference*, University of Iowa, Iowa City, Iowa, May 16-18, 1983, pp. 23-26.

42. "Identification and Control of Oscillations in Nonlinear Mechanical Systems," S.F. Masri, R.K. Miller, G.A. Bekey, and T.K. Caughey, *Proceedings of the International Association of Science and Applied Technology for Development, IASTED International Symposium on Applied Control and Identification-ACI '83*, Technical University of Denmark, Copenhagen-Lyngby, Denmark, 28 June-1 July 1983.

43. "A Method for Reducing the Order of Nonlinear Dynamic Systems," S.F. Masri, R.K. Miller, H. Sassi, and T.K. Caughey, *Journal of Applied Mechanics, ASME*, Vol. 51, No. 2, pp. 391-398 (1984).

44. "An Averaging Technique for the Analysis of Oscillations in Abruptly Nonlinear Systems," R.K. Miller and M.A. Heidari, *Proceedings of the Second International Conference on Recent Advances in Structural Dynamics*, 9-13 April, 1984, Institute of Sound and Vibration Research, University of Southampton, Southampton, England, Vol. 1, pp. 297-306.

45. "Time Domain Analysis of Nonlinear Vibration Data," S.F. Masri, R.K. Miller, H. Sassi, and T.K. Caughey, *Proceedings of the Second International Conference on Recent Advances in Structural Dynamics*, 9-13 April, 1984, Institute of Sound and Vibration Research, University of Southampton, Southampton, England, Vol. 2, pp. 551-560.

46. "Approximate Analysis of Earthquake Response of Impacting Structures," R.K. Miller and M.A. Heidari, *Proceedings of the Eighth World Conference on Earthquake Engineering*, 21-28 July, 1984, San Francisco, CA, Vol. IV, pp. 363-370.

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61. "Orthogonal Decomposition of Nonstationary Random Processes," M.I. Traina, R.K. Miller, S.F. Masri, and R.E. Kaplan, *AIAA/ASME/ASCE/AHS 26th Structures, Structural Dynamics and Materials Conference*, April 15-17, 1985, Orlando, FL, paper no. AIAA-85-0657-CP.

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68. "A Weighted Linearization Approach for Severely Nonlinear Oscillations in Stiffness-Dominated Systems," R.K. Miller and M.A. Heidari, *Proc. ASCE Structural Congress*, 15-18 September, 1986, New Orleans, LA.

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SELECTED PERSONAL QUOTATIONS IN NATIONAL PUBLICATIONS

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GRANTS

- "The Dynamics of Structures with Localized Nonlinearity", National Science Foundation, (Nov. 15, 1977 to Nov. 14, 1979)

- "The Dynamics of Structures with Localized Nonlinearity", National Science Foundation, (Jan. 15, 1981 to Jan. 14, 1983)

- "Finite Element Analysis of Wrinkling Membranes", National Aeronautics and Space Administration, P.I.: R.K. Miller, Co-P.I.: V.I. Weingarten (Dec. 1, 1981 to Nov. 30, 1982)

- "An Experimental Investigation of the On-Line Pulse Control of Earthquake Excited Structures", National Science Foundation P.I.: S.F. Masri, Co-P.I.: G.A. Bekey and R.K. Miller, (May 1, 1984 to Oct. 31, 1985)

- "U.S. - France Workshop on the Quality Guidelines for the Practice of Earthquake Engineering", National Science Foundation, P.I.: M.S. Agbabian, Co-P.I.: R.K. Miller, (Jan. 1, 1986 to Dec. 31, 1986)

- "An Experimental Investigation of the On-Line Pulse Control of Earthquake Excited Structures", National Science Foundation, Co-P.I.'s: S.F. Masri and R.K. Miller, (Mar. 1, 1984 to Oct. 31, 1986)

- "Evaluation of On-Line Pulse Control for Vibration Suppression in Flexible Spacecraft", National Aeronautics and Space Administration, Co-P.I.'s: G.A. Bekey, S.F. Masri and R.K. Miller, (Feb. 1, 1986 to Jan. 31, 1987)

- "Development of a Data Base for the Response Characteristics of Selected Mexico City Buildings Under Ambient Excitations", National Science Foundation, Co-P.I.'s: S.F. Masri and R.K. Miller, Co-Investigator: J.L. Trigos, Mexican Society of Structural Engineers, (July, 1986 to May, 1991)

ENGINEERING CONSULTING

1973	Kinemetrics, Inc., Pasadena, CA (Engineer on ambient vibration tests of full scale structures)
1974-75	Mason Industries, Los Angeles, CA

	(Consultant on earthquake isolation of mechanical equipment)
1977-92	Astro Aerospace Corporation (now Northrop Grumman subsidiary), Carpinteria, CA (Consultant on aerospace structures and dynamics)
1980	Jet Propulsion Laboratory, Pasadena, CA NASA Advisory Panel on Structural Concepts for Gossamer Spacecraft
1981	Jet Propulsion Laboratory, Pasadena, CA (Consultant on Gossamer spacecraft)
1983	Hughes Aircraft Company - Ground Systems Group (now Raytheon), Fullerton, CA (Consultant on structural design)
1984	The Aerospace Corporation, El Segundo, CA (Consultant on experimental determination of dynamic friction characteristics)

TEACHING

UNIVERSITY OF CALIFORNIA, SANTA BARBARA

Fall 1975	ME 219*	Continuum Mechanics
Winter 1976	ME 140b	Theoretical Analysis in Mechanical Engineering
	ME 202*	Advanced Dynamics
Spring 1976	ME 140c	Theoretical Analysis in Mechanical Engineering
Fall 1976	ME 140a	Theoretical Analysis in Mechanical Engineering
	ME 202*	Advanced Dynamics
Winter 1977	ME 140b	Theoretical Analysis in Mechanical Engineering
Spring 1977	ME 140c	Theoretical Analysis in Mechanical Engineering
	ME 234a*	Structural Dynamics
Fall 1977	ME 140a	Theoretical Analysis in Mechanical Engineering
	ME 234b*	Structural Dynamics
Winter 1978	ME 140b	Theoretical Analysis in Mechanical Engineering
	ME 202*	Advanced Dynamics
Spring 1978	ME 234a*	Structural Dynamics
Fall 1978	ME 140a	Theoretical Analysis in Mechanical Engineering
	ME 234b*	Structural Dynamics
Winter 1979	ME 140b	Theoretical Analysis in Mechanical Engineering
	ME 156bL	Engineering Materials and Design Concepts
Spring 1979	ME 216*	Stochastic Dynamics

UNIVERSITY OF SOUTHERN CALIFORNIA

Fall 1979	CE 227	Mechanics of Materials I
	CE 408	Risk Analysis in Civil Engineering

Spring 1980	CE 227	Mechanics of Materials I
	CE 408	Risk Analysis in Civil Engineering
Fall 1980	CE 227	Mechanics of Materials I
	CE 408	Risk Analysis in Civil Engineering
Spring 1981	CE 227	Mechanics of Materials I
	CE 408	Risk Analysis in Civil Engineering
Fall 1981	CE 227	Mechanics of Materials I
	CE 408	Risk Analysis in Civil Engineering
Spring 1982	CE 227	Mechanics of Materials I
	CE 408	Risk Analysis in Civil Engineering
Fall 1982	CE 226	Analytical Mechanics I
	CE 408	Risk Analysis in Civil Engineering
Spring 1983	CE 226	Analytical Mechanics I (Course Administrator)
	CE 408	Risk Analysis in Civil Engineering
Fall 1983	CE 226	Analytical Mechanics I (Course Administrator)
	AE/CE 541a*	Dynamics of Structures
Spring 1984	CE 226	Analytical Mechanics I (Course Administrator)
	AE/CE 541b*	Dynamics of Structures
Fall 1984	CE 228	Analytical Mechanics I (Course Administrator)
	AE/CE 541a*	Dynamics of Structures
	AE 353	Aerospace Structures I
Spring 1985	CE 228	Engineering Mechanics II
	AE/CE 541b*	Dynamics of Structures
Fall 1985	AE/CE 541a*	Dynamics of Structures
	AE 353	Aerospace Structures I
Spring 1986	AE/CE 541b*	Dynamics of Structures
	CE 428	Mechanics of Materials II
Fall 1986	CE 541a*	Dynamics of Structures
Spring 1987	CE 227	Engineering Mechanics I
	AE/CE 541b*	Dynamics of Structures
Fall 1987	CE 227	Engineering Mechanics I
Spring 1988	CE 227	Engineering Mechanics I
	CE 530*	Nonlinear Mechanics
Fall 1988	CE 227	Engineering Mechanics I
	AE 353	Aerospace Structures I
Spring 1989	AE/CE 499	Structural Concepts Design Project

	CE 227	Engineering Mechanics I
Spring 1990	AE/CE 429	Structural Concepts Design Project
Fall 1990	CE 227	Engineering Mechanics I
Spring 1991	AE 453 CE 429	Aerospace Structural Design Project Structural Concepts Design Project
Fall 1991	CE 227	Engineering Mechanics I
Spring 1992	AE 453 CE 429	Aerospace Structural Design Project Structural Concepts Design Project

UNIVERSITY OF IOWA

Spring 1995	57:007	Statics

FRANKLIN W. OLIN COLLEGE OF ENGINEERING

Fall 2004	ENGR 3320	Mechanics of Solids and Structures
Fall 2004	CC 3100	Readings in Leadership and Ethics
Spring 2005	ENGR 3320	Mechanics of Solids and Structures
Spring 2005	CC 3100	Readings in Leadership and Ethics
Fall 2005	AHSE 3199	Issues in Leadership and Ethics
Fall 2006	AHSE 3199	Issues in Leadership and Ethics
Fall 2006	ENGR 31XX	Special Topics in Mechanics and Structural Design
Spring 2008	AHSE 3199	Issues in Leadership and Ethics
Spring 2009	AHSE 3199	Issues in Leadership and Ethics
Spring 2010	AHSE 3199	Issues in Leadership and Ethics

* Graduate course

NOTE: List above excludes all summer courses and individual/independent study/thesis research courses.

GRADUATE THESIS SUPERVISION

UNIVERSITY OF CALIFORNIA, SANTA BARBARA

FATEMI, Bahram**,** Ph.D., Mechanical Engineering, 1980
"Dynamic Interaction of Adjacent Structures Through a Nonlinear Connection"

SETBACKEN, Robert Malcolm**,** M.S. Mechanical Engineering, 1979
"A Competing Variables Approach to the Design of an Optimal Seismic Isolation System"

TAYLOR, David Graham, M.S. Mechanical Engineering, 1981
"Analysis of North Hall Response to 13 August 1978 Santa Barbara Earthquake Using Finite Element Structural Program ETABS"

TRAN, Hoi Tien, M.S., Mechanical Engineering, 1978
"Reflection, Transmission and Absorption of Elastic Waves at a Frictional Boundary"

UNIVERSITY OF SOUTHERN CALIFORNIA

ALWASH, Azzam Jawad Mahdi**,** Ph.D., Civil Engineering, January 1990
"An Approximate Analysis of Lateral Vibrations of a Loosely-Bonded Pile"

BAN, Seung Pyo**,** Ph.D., Civil Engineering, 1986
"Transient Response Techniques for Large Locally-Nonlinear Systems"

CHOU, Shen-Ping**,** Ph.D., Civil Engineering, November 1990
"Constrained Optimal Design of a Nonlinear Dynamic System"

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