CURRICULUM VITAE:
Gregory R. Miller, Ph.D.

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Birth: August 2, 1958
Seattle, Washington

Other: Married to Susan Stluka Miller, D.D.S.
Two children: born 1993 and 1996.

Academic background

Ph.D.	Northwestern University	1983
M.S.C.E.	Northwestern University	1981
B.S.C.E. (*Magna Cum Laude)*	University of Washington	1980

Professional history

Associate Dean for Infrastructure, College of Engineering, University of Washington, September 2007 to present.

Professor of Civil Engineering, University of Washington, September 1995 to present.

Associate Professor of Civil Engineering, University of Washington, September 1988 to September 1995.

Assistant Professor of Civil Engineering, University of Washington, January 1984 to September 1988.

Visiting Scholar, Institute for the Static and Dynamic Analysis of Aerospace Structures, University of Stuttgart, Stuttgart, Germany, September 1989 to June 1990.

Visiting Scholar, School of Civil and Environmental Engineering, University of New South Wales, Sydney, Australia, September 1997 to June 1998.

Refereed Journal Publications (309 citations as of January 2008, h-index: 11, citations/item: 12.88)

G.R. Miller and L.M. Keer (1982), "An Approximate Analytical Model of Anchor Pull-Out Test", *ASME Journal of Applied Mechanics,* **104**, 768-772.

L.M. Keer and G.R. Miller (1983), "Contact Between an Elastically Supported Circular Plate and a Rigid Indenter", *International Journal of Engineering Science,* **21**, 681-690.

L.M. Keer and G.R. Miller (1983) "Smooth Indentation of a Finite Layer", ASCE *Journal of the Engineering Mechanics Division*, **109**, 706-717.

G.R. Miller and L.M. Keer (1983) "Interaction Between a Rigid Indenter and a Near-Surface Void or Inclusion", *ASME Journal of Applied Mechanics*, **105**, 615-620.

M.D. Bryant, G.R. Miller and L.M. Keer (1984) "Line Contact Between a Rigid Indenter and a Damaged Elastic Body", *Quarterly Journal of Mechanics and Applied Mathematics*, **37**, 467-478.

T.M. Clarke, G.R. Miller, L.M. Keer, and H.S. Cheng (1985) "The Role of Near-Surface Inclusions in the Pitting of Gears", *ASLE Transactions*, **28**, 111-116.

G.R. Miller and L.M. Keer (1985) "A Numerical Technique for the Solution of Singular Integral Equations of the Second Kind", *Quarterly of Applied Mathematics*, **43**, 455-465.

G.R. Miller, L.M. Keer and H.S. Cheng (1985) "On the Mechanics of Fatigue Crack Growth Due to Contact Loading", *Journal of the Royal Society of London*, Series A, **397**, 197-209.

G.R. Miller (1986) "A General Green's Function Solution for the Anisotropic Contact Problem", *ASME Journal of Applied Mechanics*, **108**, 386-389.

G.R. Miller (1986) "The Behavior of a Crack Near a Low-Angle Grain Boundary", *International Journal of Fracture,* **31**, 143-150.

G.R. Miller and R.P. Young (1987) "On Singular Solutions for Inclusion Problems in Plane Elasticity" *ASME Journal of Applied Mechanics*, (Brief Note), **54**, 738-740.

G.R. Miller (1987) "A Preliminary Analysis of Subsurface Crack Branching Under a Surface Compressive Load", *ASME Journal of Tribology*, **110** (April),

G.R. Miller and M.E. Butler (1988) "On the Periodic Response of an Elastic-Perfectly Plastic SDOF Oscillator", *ASCE Journal of the Engineering Mechanics Division*, **114** (3), 536-550.

G.R. Miller (1988), "A LISP-Based Object-Oriented Approach to Structural Analysis" *Engineering with Computers*, **4**, 197-203.

G.R. Miller (1989), "Analysis of Cracks Near Interfaces Between Dissimilar Anisotropic Materials" *International Journal of Engineering Science*, **27**, 667-678.

G.R. Miller and W.L. Stock (1989), "Analysis of Branched Interface Cracks Between Dissimilar Anisotropic Media", *ASME Journal of Applied Mechanics*, **56**, 844-849.

D.J. Mukai, R. Ballarini, and G.R. Miller (1990), "Analysis of Branched Interface Cracks", *ASME Journal of Applied Mechanics*, **57**, 887-893.

G.R. Miller (1991) "An Object-Oriented Approach to Structural Analysis and Design", *Computers and Structures*, **40**, 75-82.

G.R. Miller (1993) "Coordinate-Free Isoparametric Elements", *Computers and Structures,* **49**(6), 1027-1035.

G.R. Miller, S. Banerjee and K. Sribalaskandarajah (1995) "A Framework for Interactive Computational Analysis in Geomechanics" *Computers and Geotechnics*, **17**(1), 17-37.

G.R. Miller and S.C. Cooper (1995) "Something Old, Something New: A Multifaceted Approach to the Teaching of Engineering Mechanics", *ASEE Journal of Engineering Education*, **84**(2), 105-115.

S.C. Cooper and G.R. Miller (1996) "A Suite of Computer-Based Tools for Teaching Mechanics of Materials", *Computer Applications in Engineering Education*, **4**(1), 41-49.

M.D. Rucki and G.R. Miller (1996) "An Algorithmic Framework for Flexible Finite Element-Based Structural Modeling", *Computer Methods in Applied Mechanics and Engineering*, **36**(3-4), 363-384.

M.D. Rucki and G.R. Miller (1998) "An adaptable finite element modeling kernel," *Computers and Structures,* **69**(3), 399-409.

P. Arduino, G.R. Miller, and A. Ogunrinde (2001) "Live Modeling of 1D Wave Propagation in Layered Soil Media", *Computer Applications in Engineering Education*, **9**(4), 248-258.

G.R. Miller, P. Arduino, J. Jang, and C. Choi (2003) "Localized Tensor-Based Solvers for Interactive Finite Element Applications Using C++ and Java", *Computers and Structures,* **81**(7), 423-437.

A. Lindblad and G.R. Miller (2004) "Generation, Analysis, and Comparison of Multiple Structural Design Alternatives in an Interactive Real-time Environment,"*Engineering with Computers,* **19**: 255-263.

J. Jang and G.R. Miller, (2008) "Performance Boundaries for Interactive Finite Element Applications", *Engineering with Computers*, in review.

P. Mackenzie-Helnwein, P. Arduino, W. Shin, J.A. Moore, G.R. Miller (2009) "Modeling Strategies for Multiphase Drag Interactions Using the Material Point Method", *International Journal for Numerical Methods in Engineering*, in press.

Fully-Refereed Conference Proceedings

"A Class Architecture for Interactive Finite Element Analysis", Tools for Object-Oriented Languages and Systems Conference, Sydney, Australia, December 1991.

"An Integrated Modeling, Analysis, and Authoring Environment for Structural/Mechanical Engineering Education", ASEE Annual Conference and Exposition, Chicago, IL, June 2006.

Abstract and Non-Refereed Conference Proceedings and Other Non-Journal Articles

G.R Miller, "The Behavior of a Crack Near a Low-Angle Grain Boundary", *Proceedings of the 19th Midwest Mechanics Conference*, Columbus, Ohio, September 1985.

D. Mukai and G.R. Miller, "Analysis of a Branched Interface Crack" *Proceedings of the 20th Midwest Mechanics Conference*, West Lafayette, September, 1987.

G.R. Miller, "Structural Analysis on a LISP machine", *Proceedings of the ASME International Computers in Engineering Conference*, San Francisco, August, 1988.

G.R. Miller, "A Simple Difference Equation as a Model of Strongly Nonlinear Dynamical Systems", *Proceedings of the First Pan American Conference on Applied Mechanics*, Rio de Janeiro, January, 1989.

G.R. Miller, "An Object-Oriented, Concurrent Approach to Structural Analysis and Design" *Proceedings of the ASCE 6th Conference on Computing in Civil Engineering*, Atlanta, September, 1989.

"What Object Oriented Programming Can Mean for Structural Engineers" *Proceedings of the ASCE Structural Division 10th Conference on Electronic Computation*, Indianapolis, May, 1991.

R.N. Palmer and G.R. Miller, "The Use of Computers as an Aid to Modular Learning in Civil Engineering", *Computing in Civil Engineering*, Proceedings of the 8th Conference, ASCE, Dallas, 1992.

G.R. Miller, S. Banerjee and K. Sribalaskandarajah, "Interactive Analysis of Evolving Earth Structures", *Proceedings of the 4th International Symposium on Numerical Models in Geomechanics*, Swansea, Wales, August, 1992.

M.D. Rucki and G.R. Miller, "A Program Architecture for Interactive Nonlinear Dynamic Analysis of Structures", with M. Rucki, *Proceedings of the ASCE Conference on Computing in Civil and Building Engineering*, Anaheim, June 1993.

A. Lindblad and G.R. Miller (2003) "Interactive Analysis and Comparison of Multiple Structural Design Alternatives," *Proceedings of the ASCE Structures Congress*, Seattle, May 2003.

P. Mackenzie-Helnwein, P. Arduino, J. Moore, W-K Shin, and G.R. Miller (2007) "Modeling Interaction of Phases in Mixtures using a Multi-field Material Point Method," *9th US National Congress on Compuatational Mechanics*, San Francisco, July 2007.

G.R. Miller (2008) "A Multifaceted Approach to Introductory Structural Analysis Instruction", 2008 ASCE Structures Congress, Vancouver, BC, April 2008.

P. Mackenzie-Helnwein, P. Arduino, W-K Shin, and G.R. Miller (2008) "Modeling Rain-Induced Landslide Initiation from Wetting of Dry Soil to Failure using a Multiphase MPM," *SIAM Annual Meetings*, San Diego, July 2008.

Books, Software (14,760 non-commercial downloads 1/2002-5/2008)

G.R. Miller and S.C. Cooper, *Visual Mechanics—Beams and Stress States*, PWS, inc., Boston, 1998. (Combined book/CD-ROM)

G.R. Miller and D. Stahl, *Visual Mechanics II—Statics*, Dr. Software LLC, 2001.

G.R. Miller and D. Stahl, *Visual Mechanics III—Kinematics*, Dr. Software LLC, http://www.drsoftware-home.com/DrK/, 2001.

P. Arduino, G.R. Miller, and A. Ogunrinde, *Dr. Layer—Wave Propagation in Layered Media*, http://octavia.ce.washington.edu/DrLayer/, 2001.

G.R. Miller, *BeamVisualizer, Stress, Visualizer, StaticsVisualizer, KinematicsVisualizer*, and supporting materials, licensed by Prentice-Hall, 10/2004, initial release 2/2005. Renewal 8/2007.

G.R. Miller, *Dr. Shakes*, http://octavia.ce.washington.edu/DrShakes/, Cross platform release, 2005.

G.R. Miller, *Dr. Quack*, http://octavia.ce.washington.edu/DrQuack/, Cross platform release, 2005.

Editing and Other Scholarly Papers

L.N. Lowes and G.R. Miller, eds. "Engineering Smarter", *Proceedings of the 2003 ASCE/SEI Structures Congress*, May 2003, Seattle, WA.

Sponsored Research

"An Investigation of Mode II Fatigue Crack Growth Due to Contact Loading", National Science Foundation, $73,382, 1/86-12/88 (P.I.).

"Studies in Applied Mechanics", National Science Foundation/Symbolics, Inc., $205,005, 6/87-12/92 (P.I. - Presidential Young Investigator Award)

"Object-Oriented Framework for Geotechnical Engineering", National Science Foundation, $26,000, 12/91-12/92 (co-P.I. w/ S. Banerjee)

"Computational Abstractions for Dynamic Nonlinear Analysis of Structures", National Science Foundation, $119,685, 4/92-10/95 (P.I.).

Engineering Coalition of Schools for Excellence in Education and Leadership (ECSEL), National Science Foundation, $60,000/year as a participant, 6/91-6/94; additional $40,000/yr as Co-PI for Curriculum, 7/94-6/97; Institutional Co-PI 8/95-6/97.

"Mechanics Curriculum Dissemination", National Science Foundation/ECSEL, $20,000, 9/93-9/95 (P.I.).

Engineering Coalition of Schools for Excellence in Education and Leadership (ECSEL), National Science Foundation, $2.9 million/yr 10/95-9/2000 (renewal) cross-coalition co-P.I. 8/95-8/97.

"An Advanced Educational Module to Study Wave Propagation", Pacific Earthquake Engineering Research Center, $29,600 6/99-7/2000 (co-P.I. with Pedro Arduino)

"Mechanics of Materials Learning Anytime, Anywhere", College of Engineering, $58,534, 6/2004-6/2005. (co-PI with Peter Mackenzie).

"An Integrated Modeling, Analysis and Authoring Environment for Structural/Mechanical Engineering Education", National Science Foundation, $75,000 1/1/05-12/31/07.

"High Strength Vanadium Steel Alloy Tubes in Civil Engineering Applications", Vanadium Technology Program, $1,063,828, 5/2005-4/2007 (co-PI with Charles Roeder and Dawn Lehman). 4/1/2005-3/31/2007.

"Complex Systems Engineering in a Global Business Environment -
Phase I", Boeing, $68,000, (co-participant with various COE faculty). 9/1/2005-11/30/2006.

"Development of a solid/fluid two-field material point method for modeling saturated granular materials", UW Royalty Research Fund, $37,971, 2/1/2007-3/1/2008. (co-PI with P. Arduino (PI) and P. Mackenzie).

"MRI: Acquisition of Equipment to Simulate Collapse of Engineered Systems under Extreme Loads", National Science Foundation, $557,870, 8/15/2007-2/14/2010. (co-PI with D. Lehman (PI), L. Lowes, C. Roeder, and J. Stanton).

"Low-Cost, Distributed-Sensor-Based Weigh-In-Motion Systems", TransNow, $70,841, 7/1/2008-6/30/2009. (PI, co-PI with Peter Mackenzie and Yinhai Wang)

"Landslide and Debris-flow Induced Static and Dynamic Loads on Protective Structures," National Science Foundation, $439,148, 7/1/2009-6/30/2012, (co-PI with P. Mackenzie and P. Arduino). FUNDED.

Project reports (reports to sponsors)

Final reports were prepared for each of the funded projects listed above.

Other Research-Related Activities

Mechanics of Materials, with Stephen Cooper, 1992-96. A comprehensive, computer-based set of instructional materials developed under the auspices of the ECSEL project. These materials are currently in use at various universities, and continue to be available on the World Wide Web. Ported to Windows, 1999.

Invited Lectures and Seminars

"Applications of Symbolic Computing in Structural and Applied Mechanics and Computer-Aided Design", Washington Exhibit of Science and Technology, Seattle, Washington, October, 1988.

"Object-Oriented, Incremental Structural Analysis: Towards 'WYSIWYG' CAD", Architects and Engineering Professionals Users' Group Symposium, Seattle, Washington, October, 1988.

"An Object-Oriented Approach to Structural Analysis and Design", Institut für Statik und Dynamik der Luft- und Raumfahrt Konstruktionen, University of Stuttgart, November 1989.

"Analysis of Branching Cracks at Bimaterial Interfaces", Invited Lecture: Lehrstuhl für Technische Mechanik/Institut für Angewandte Mathematik, University of Erlangen, West Germany, December 1989.

"To Guide or Note to Guide: When and How Should Students be in Charge?", R.J. Bowen Retirement Symposium: Engineering Education in the 21st Century, May, 1996.

“Real-Time Modeling and Analysis in Structures and Mechanics”, Seminar presentation, Department of Civil Engineering, LSU, New Orleans, March 2001.

“Live Modeling in Structural Engineering Applications”, Kyungpook Architectural Institute 30-Year Anniversary, Daegu, South Korea, October 2005.

Presentations Given at Conferences

"Interaction Between a Rigid Indenter and a Near-Surface Void or Inclusion", with L.M. Keer, ASME Winter Annual Meeting, Boston, November 1983.

"The Role of Near-Surface Inclusions in the Pitting of Gears", with T.M. Clarke, L.M. Keer, and H.S. Cheng, ASLE 39th Annual Meeting, Chicago, May 1984.

"On the Mechanics of Fatigue Crack Growth Due to Contact Loading", with L.M. Keer and H.S. Cheng, IUTAM 16th International Congress, Copenhagen, August 1984.

"The Behavior of a Crack Near a Low-Angle Grain Boundary", 19th Midwest Mechanics Conference, Columbus, Ohio, September 1985.

"On the Periodic Response of an Elastic-Perfectly Plastic SDOF Oscillator", ASCE EMD Specialty Conference, Buffalo, May 1987.

"Chaotic Dynamics in Engineering Applications - An Introduction and Overview" ASCE EMD Specialty Conference, Buffalo, May, 1987.

"Mode II Fatigue Crack Propagation Due to Contact Loading" National Science Foundation Tribology Workshop, Atlanta, August, 1987.

"Analysis of a Branched Interface Crack" 20th Midwest Mechanics Conference, West Lafayette, September, 1987 (with David Mukai).

"A Preliminary Analysis of Subsurface Crack Branching Under a Surface Compressive Load", *ASME Journal of Tribology*, ASME Tribology Division Annual Meeting, San Antonio, October 1987.

"Structural Analysis on a LISP machine", presented at the ASME International Computers in Engineering Conference, San Francisco, August, 1988.

"A Simple Difference Equation as a Model of Strongly Nonlinear Dynamical Systems", presented at the First Pan American Conference on Applied Mechanics, Rio de Janeiro, January, 1989.

"Chaos, Fractals and Sensitivity Analysis", presented at the ASCE Water Resources Planning and Management Division Specialty Conference, Sacramento, May, 1989.

"An Object-Oriented Approach to Structural Analysis and Design", International Conference on the Application of Artificial Intelligence Techniques to Civil and Structural Engineering, London, September, 1989.

"An Object-Oriented, Concurrent Approach to Structural Analysis and Design" presented at the ASCE 6th Conference on Computing in Civil Engineering, Atlanta, September, 1989.

"What Object Oriented Programming Can Mean for Structural Engineers" presented at the ASCE Structural Division 10th Conference on Electronic Computation, Indianapolis, May, 1991.

"A Class Architecture for Interactive Finite Element Analysis", Tools for Object-Oriented Languages and Systems Conference, Sydney, Australia, December 1991.

"Alternative Abstractions for Modeling Structures", American Concrete Institute's Spring Convention, San Francisco, March 1994.

"ECSEL Engineering Core Courses at the University of Washington", with G. Kalonji, Project Impact (NSF Workshop), Arlington, June 1994.

"ECSEL Core Course Dissemination", with G. Zick, Project Impact (NSF Workshop), Arlington, Va., June 1994.

"New Crossovers Between Mechanics and Computer Modeling", with G. Turkiyyah and R. Goldstein, 12th U.S. National Congress on Applied Mechanics, Seattle, June 1994.

"Nondestructive Integration of Design in to the Teaching of Engineering Mechanics", 12th U.S. National Congress of Applied Mechanics, Seattle, June 1994.

"NSF Education Consortia " Panel Member, ASCE Congress on Computing, June 1994

"Role of Multimedia in Design, Research, and Education" Panel Member, ASME Design Technical Conference, Minneapolis, September 1994.

“Simulation and Presentation Software for Teaching Engineering Mechanics”, with S. Cooper, Computer Support Workshop - Using Technology to Support Instruction, University of Washington, June 1995.

"A Single-School Perspective on Coalition Activities", with G. Kalonji, ASEE 1995 Annual Conference/NSF Project Showcase, Anaheim, CA, June 1995.

"A Multi-Algorithmic Class Structure for Finite Element Modeling", with M.D. Rucki, ICES '95, Honolulu, July, 1995.

“Fusing Analysis, Instruction, and Collaboration”, with S.C. Cooper, NSF Innovators’ Conference, Arlington, VA, April, 1997.

"Interleaving Guided and Unguided Simulation for Exploring Structural Behavior ", with S.C. Cooper, ASCE Structures Congress, Portland, OR, April, 1997.

"Direct Manipulation Finite Element Analysis", ASCE Structures Congress, Portland, OR, April, 1997.

“Interactive Analysis and Comparison of Multiple Structural Design Alternatives”, (with Alex Lindblad) ASCE Structures Congress, Seattle, WA, May 2003.

Professional licenses

None

Professional Society Membership

American Society of Civil Engineers – member
Technical Committee on Elasticity – 1989-1997
Vice Chair 1991-1992; Chair 1992-1994
Technical Committee on Computer Practice Education – 1990-present

American Society of Engineering Education — member

Professional Society and Other Service

Associate Editor for: *ASCE Journal of Engineering Mechanics*, (handled the review of approximately 60 papers/year) 1992-1994.

Task Leader for Upper Level Curriculum, ECSEL coalition, 1993-94.

Co-PI **for Curriculum**, ECSEL coalition, 6/94-9/95

Cross-Coalition Co-PI for Learning By Design, ECSEL coalition, 10/95-6/97

Member ASCE Technical Committee on Elasticity – 1989-1997
Vice Chair 1991-1992; Chair 1992-1994

Member Technical Committee on Computer Practice Education – 1990-present

Session chair: A Retrospective on Elasticity I, ASCE Conference of the Engineering Mechanics Division, College Station, June 1993.

Session chair: NSF Education Consortia (Panel Discussion), ASCE Congress on Computing, Washington, D.C., June, 1994.

Session chair: Opportunities and Challenges in Mechanics, 12th U.S. National Congress of Applied Mechanics, Seattle, June 1994.

ASCE Education Conference, Workshop Group Facilitator, Denver, June 1995.

Steering Committee Member/, ASCE/SEI Structures Conference, Seattle, 2003.

Session chair: Materials and Methods Applications, ASCE/SEI Structures Congress, Seattle, May, 2003.

Steering Committee Member/, ASCE Engineering Mechanics Conference, Seattle, 2003.

Reviews Made

ASME Journal of Applied Mechanics, ASME Journal of Tribology, International Journal of Plasticity, ASCE Journal of Engineering Mechanics, Composites Science and Technology, International Journal of Solids and Structures, ASCE Journal of Computing in Civil Engineering, Composites Science and Technology, ASEE Journal of Engineering Education, Mechanics of Materials, National Science Foundation (Tribology Program, Applied Mathematics Program, Structures and Building Systems Program, Solid Mechanics program, Major Research Instrumentation Panel, DUE), Irwin Publishing Co., ACI Journal, and the Air Force Office of Scientific Research.

Awards and Honors

Cabell Fellowship, Northwestern University, 1980-1981.

General Motors Fellowship, Northwestern University, 1983.

Presidential Young Investigator Award, National Science Foundation, 1987.

James M. Robbins Excellence-in-Teaching Award, Rocky Mountain District, Chi Epsilon, 1989.

College of Engineering Faculty Achievement Award for Outstanding Teaching, 1993.

University of Washington Distinguished Teaching Award, 1994

National Keck Foundation Teaching Award , 1995-96.

J. Ray Bowen Endowed Professorship for Innovation in Engineering Education, 2000-2003.

CEE Outstanding Instructor, 2008.

Teaching

Course	Quarter	Credits	No. of Students	Course Title	Student Ratings 1-4 avg (5-pt scale)	Student Ratings: Lines 3/4
CESM 501	A 91	6	28	Structural Mechanics		4.43/4.48
ENGR 220	W 92	4	41	Mech. of Materials		4.38/4.25
ENGR 220	Sp 92	4	43	Mech. of Materials		4.13/4.09
CIVE 363	Sp 92	4	76	Materials		4.15/3.97
CESM 501	A 92	6	26	Structural Mechanics		4.54/4.35
ENGR 220	W 93	4	48	Mech. of Materials		4.67/4.58
CESM 501	A93	6	32	Structural Mechanics		†
ENGR 220	W 94	4	52	Mech. of Materials		†
CIVE 379	Sp 94	3	77	Mech. of Struct. I		†
CESM 501	A 94	6	18	Structural Mechanics		†
ENGR 100	W 95	4	23	Intro to Design		3.7/3.7
CIVE 379	Sp 95	3	59	Mech. of Struct. I		4.6/4.4
CESM 501	A 95	6	19	Structural Mechanics		4.8/4.6
ENGR 220~	W 96	4	95	Mech. of Materials		4.3/4.1
CIVE 451	Sp 96	3	43	Steel Design		4.0/3.8
CIVE 379	A 96	3	62	Mech. of Struct. I		4.6/4.4
ENGR 230#	A 96	4	90	Dynamics		N.A.
CESM 503	W 97	3	20	Materials Modeling		4.8/4.3
CIVE 451	Sp 97	3	15	Steel Design		4.58/4.71
CESM 501	A 98	6	30	Structural Mechanics		4.79/4.50
CIVE 220	W 99	4	100	Mech. of Materials		4.90/4.68(adj)
CIVE 451	Sp 99	4	15	Steel Design		4.47/4.26 (adj)
CESM 501	A 99	6	38	Structural Mechanics	4.41	4.69/4.61 (adj)
CEE 379	A 99	4	45	Structural Engr I	4.31	5.01/4.62 (adj)
CEE 220	Sp 00	4	125	Mech. of Materials	4.36	4.76/4.56 (adj)
CEE 501	A 00	6	19	Structural Mechanics	4.59	4.81/4.59 (adj)
CEE 220	Sp 01	4	123	Mech. of Materials	4.45	4.8/4.63 (adj)
CEE 458	Sp 01	3	9	Adv Structures II	4.68	4.71/4.73 (adj)
CEE 501	A 01	6	24	Structural Mechanics	4.9	5.06/5.05 (adj)
CEE 379	W 02	4	60	Structural Engr I	4.43	4.92/4.75 (adj)
CEE 220	Sp 02	4	122	Mech. of Materials	4.1	4.3/4.1 (adj)
CEE 501	A 02	6	12	Structural Mechanics	4.8	5.0/4.9 (non-adj)
CEE 505	W 03	3	7	Computing	4.7	4.9/4.9 (non-adj)
CEE 220	SP 03	4	177	Mech. of Materials	4.5 (adj)	4.8/4.5 (adj)
CEE 392	A 03	1	118	CEE Computing	4.2	4.8/4.5 (adj)
CEE 501	A 03	6	31	Structural Mechanics	4.8	5.0/5.0 (adj)
CEE 505	W 04	3	19	Computing	4.1	4.7/4.1 (adj)
CEE 458	Sp 04	3	17	Adv Structures II	4.5	4.9/4.8 (adj)
CEE 501	A 04	6	29	Structural Mechanics	4.5 (adj)	5.1/4.6 (adj)
CEE 392	A 04	1	124	CEE Computing	4.3	4.7/4.4 (adj)
CEE 505	Sp 05	3	15	Computing	4.4	4.9/4.5 (adj)
CEE 501	A 05	6	30	Structural Mechanics	4.3 (adj)	4.8/4.5 (adj)
CEE 379	A 05	4	38	Structural Engr I	4.6 (adj)	4.8/4.8 (adj)
CEE 392	A 06	1	121	CEE Computing	3.7 (adj)	4.2/4.0 (adj)
CEE 501	A 06	6	23	Structural Mechanics	4.7 (adj)	5.0/4.8 (adj)
CEE 379	W 07	4	59	Structural Engr I	4.7 (adj)	5.0/4.9 (adj)

CEE 220	Sp 07	4	143	Mech. of Materials	4.5 (adj)	4.9/4.7 (adj)
CEE 392	A 07	1	95	CEE Computing	3.7 (adj)	4.3/3.9 (adj)
CEE 379	W 08	4	49	Structural Engr I	4.5	4.7/4.8 (adj)
CEE 379	A 08	4	61	Structural Engr I	4.7	4.9/4.8 (adj)
CEE 379	W 09	4	58	Structural Engr I		

†Used Form X, which did not report the same numbers.
~ co-taught w/ Joe Mahoney
# co-taught with –Uy-Loi Li (A&A)

Short Courses, Workshops, and Other Educational Programs

"Object-Oriented Programming for Engineering Applications", 4 week lecture series presented at the Institute for Static and Dynamic Analysis of Aerospace Structures, University of Stuttgart, June-July 1991.

Seismic Design of Structures I: Dynamic Analysis and Lateral Load Determination, Participating Instructor, Professional Engineering Practice Liaison Program, University of Washington, October-November 1992-1994.

"Technology and Teaching", (1 and 2-day workshops) Provost's Annual Workshops on Teaching and Learning, University of Washington, 1997, 1998, 2000. (co-leader with Jaime Diaz)

Cooperative Learning Workshop, Department of Civil and Environmental Engineering (co-organizer and participant) March 31, 2001.

Chaired Doctoral Degrees

David Mukai, December, 1990
Assistant Professor of Civil Engineering, University of Wyoming

Michael Rucki, December, 1995
Advanced Analysis Group, Boeing

Kandiah Sribalaskandarajah, March 1996 (w/ S. Banerjee)
KPFF Engineers

Jaewon Jang, March 2007.
Wolfram Research

Genevieve Farrar (in progress)

Carter Mast (in progress)

Chaired Master Degrees

Kjell Mathisen – M.S.C.E. (non-thesis)	June, 1984
Mark Butler – M.S.E (non-thesis)	June, 1985
Bahman Himi – M.S.C.E. (non-thesis)	June, 1985
Elaine Worden – M.S.C.E. (thesis)	June, 1985
Mohammad-Ali Askarian – M.S.C.E. (non-thesis)	June, 1985
Bill Stock – M.S.C.E. (thesis)	June, 1986
Olav Aamlid – M.S.C.E. (thesis)	August, 1986
Roger Young – M.S.E. (thesis)	June, 1987
Jolie Nishikawa – M.S.C.E. (thesis)	March, 1987
Toan Nguyen – M.S.C.E. (non-thesis)	August, 1988
Dushyantha Jayawardena – M.S.C.E. (thesis)	August, 1989
Jen-Ping Cheah – M.S.C.E. (thesis)	August, 1989
Lisa Pierce – M.S.C.E. (thesis)	December, 1989
James Costello – M.S.C.E. (non-thesis)	June, 1991
Michael Rucki – M.S.C.E. (thesis)	March, 1992
Hwa-Ru Cheng – M.S.C.E. (thesis)	March, 1992
Geoff Sutton – M.S.C.E. (thesis)	August, 1993
Marianne Redanz – M.S.C.E. (thesis)	December, 1993
Sandro Kodama – M.S.C.E. (thesis)	December, 1993
Garrett Hall – M.S.C.E. (thesis)	December, 1993
Kazuhiko Morishita – M.S.C.E. (non-thesis)	August, 1994
Soo-Kuan Teo – M.S.C.E. (non-thesis)	August, 1994
Robert Goldstein – M.S.C.E., (thesis)	December, 1994
Byron Miranda - M.S.E. (thesis)	December, 1995
Paul Thomassen - M.S.C.E. (thesis)	December, 1995
Perry Cole — M.S.C.E. (thesis),	September, 1997
Drake Branch — M.S.C.E. (thesis)	June, 2000
Steve Miller — M.S.C.E. (thesis)	June, 2000
Hakon Bardarson — M.S.C.E. (thesis)	December, 2000
Ayokunle Ogunrinde — M.S.C.E. (thesis)	March, 2001
Jae Won Jang — M.S.C.E. (thesis)	June, 2001
Alex Lindblad — M.S.C.E. (thesis)	December, 2001
Andrew Ayling — M.S.C.E. (thesis)	December, 2002
Danny Currit — M.S.C.E. (thesis)	December, 2006
Ingimar Jensson (w/ J. Berman)— M.S.C.E. (thesis)	August, 2007
Carter Mast (w/ P. Mcakenzie) — M.S.C.E. (thesis)	December, 2008
Chia-So Chuang (w/ P. Mackenzie) — M.S.C.E. (thesis)	March, 2009

Other Student Supervision (service on graduate degree committees)

4-5 master's committees per year

2-4 Ph.D. committees per year

Departmental Service (Major roles only listed)

Teaching Evaluation Committee, 1985-86

Curriculum Review Committee, 1987-88

SGEM Graduate Program Coordinator, 1990-92

Chair – Student Affairs/Scholarship Committee, 1988-92

Peer Evaluation of Teaching Committees, 1992-94

Chair - Undergraduate Education Committee, 1995-1997.

Director of Instruction, 1998-2002

ABET Coordinator, 1999-2002

Civil Division Director, 2002-2003

CEE Chair Search, 2006-07

Graduate Program Advisor (Structures Group), 2006-2007

Undergraduate Education Committee/ABET 2008-present

College Service

Student Affairs, 1985-87

Open House Steering Committee, 1987

ENGR 210/220/230 Oversight Committee 1992-present

Ad Hoc Committee on Teaching and Service, 1993-94

Space Sharing Committee, 2000-01

Global Integrated Systems Engineering (GISE) Advisory Board, 2005-present

Educational Policy Committee, 2006-07

Academic Misconduct, 2007.

Associate Dean, Infrastructure and Computing, 2007-present

University Service

Faculty Senate, 1988-89.

Aeronautical Engineering Graduate Program Review Committee, 1991

Core Group Working Committee, 1993 - 1997

Program for Faculty Teaching Fellows – Senior Fellow, 1994-96, 1998-99

Faculty Council on Instructional Quality, 1994-1996; Chair, 1996-97

Joint Faculty Council Subcommittee on Proposed University Undergraduate College, 1994-95.

Distinguished Teaching Award Selection Committee, 1995

President's Task Force on Enrollment, 1996-97.

UW Teaching Academy Board Member, 1998-present

Program for New Faculty– Senior Fellow, 2000-present

President's University Initiatives Fund Review Committee, 2001

Office of Educational Assessment Director Search Committee, 2001

Academic Technology Advisory Committee (ATAC), 2003-2008

Faculty Senate, 2004-2006

Faculty Council on Educational Technology (FCET), 2005-2007

Catalyst Advisory Board, 2006-present

Capital Projects Office Client Advisory Committee, 2008-present

UW IT Governance Action Team, 2008-2009

Assistant Vice Provost for Campus Planning Search Committee, 2008-2009

Student Service

ASCE Student Chapter Advisor, 1990-93

Community Service

None

National Service

ASCE 2003 Structures Congress, Steering Committee, 2000-2003

All Other Service

None

Consulting Experience

Shure Brothers, Inc. (Evanston, Illinois) - record/stylus wear (1982)

The Timken Company (Canton, Ohio) - peeling initiation in bearings (1983)

PSF Industries, Inc. (Seattle, WA) – holding tank design (1987), processing tower design (1991), US/Canada code provision comparison (1991)

Hammond, Collier, and Wade-Livingstone Associates (Seattle, WA) – Composite pipe failure (1989).

Satsuma Software, Inc. (Seattle, WA) – Educational software development (1995-1998)

Dr. Software, LLC. (Seattle, WA) – Educational and professional software development (1998-present)