

1. Name and Date of Birth.

Colonel Allen C. Estes, 5 November 1956

2. Academic Rank.

Professor, full-time

3. Degrees with fields, institutions and dates.

Bachelor of Science, United States Military Academy, 1978

Master of Science in Civil Engineering—Structures, Stanford University, 1987

Master of Science in Civil Engineering—Construction Management, Stanford University, 1987

Master of Business Administration, C.W. Post Campus, Long Island University, 1989

Master of Military Art and Science, U.S. Army Command and General Staff College, 1991

Master of Arts in National Security and Strategic Studies, Naval War College, 2004

Doctor of Philosophy, Civil Engineering, University of Colorado, 1997

4. Number of years service on this faculty, including date of original appointment and dates of advancement in rank.

One, Cal Poly Professor, 2007

Ten, USMA: Professor, 2005

Associate Professor, 1998

Assistant Professor, 1988

Instructor, 1987

5. Other related experience - teaching, industrial, etc. - responsibility, location, dates.

Teaching, Research, and Industrial Assignments:

U.S. Army Engineer School, Fort Belvoir, Virginia (1982-83) Taught Concrete Construction, Pipeline Design, and Interior/Exterior Electrical Systems to Engineer Officer Advanced Course and Basic Course Students. Obtained the awards of Senior Instructor and Master Instructor.

Park College, Fort Leonard Wood Campus (1998-99) Taught Introduction to Construction and Operation/Production Management at night.

Areas of Active Research:

System Reliability, Optimization of Structures, Life-Cycle Performance of Structures, Engineering Education

Faculty Advisor for Undergraduate Projects:

ARCE 453 “Life-Cycle Building Challenge” Keith Cullum and Paul Sargent, Spring 2007

CE489 “Redesign of Washington Gate Intersection” Cadet Jake Torrey, Spring 2006
CE489 “The West Point K’nexercise: An Interactive Construction Management Learning Experience” Cadets Paul Stelzer and Jared May, Spring 2003 and Cadets Scott Pffirman and Reed Brown, Spring 2005
CE489 “Lock and Dam Reliability Analysis” Cadet Jeremiah Gipson Spring 2002
CE489 “Prioritizing Repair Projects for Locks and Dams” Cadets Laura E. Callahan and Jennifer L Uyeshiro. Spring 2001
CE489 “Wall Breach Site at Range 12” Cadets Robert B. Graetz and Garner L. Rivard. Spring 2000

Courses Taught at USMA and Cal Poly Prior to Current Academic Year:

ARCE 212 Structures II (Quarters 2 and 3, AY 06-07)
EM 302 Statics and Dynamics (Terms 1 and 2, AY 87-88)
EM 364 Mechanics of Materials (Terms 1 and 2, AY 88-89, AY 89-90, Term 2, AY 00-01)
CE 364 Mechanics of Materials and Material Science (Term 1, AY 05-06)
CE371 Soil Mechanics and Foundation Design (Term 2, AY 05-06)
CE 400A CE Professional Practice Seminar (Term 2, AY 01-02, AY 02-03, AY04-05)
CE 403 Structural Analysis (Term 1, AY 99-00)
CE 404 Design of Steel Structures (Term 2, AY 99-00)
CE 450 Construction Management (Term 1, AY 04-05)
CE 483 Design of Reinforced Concrete Structures (Term 1, AY 00-01, AY 01-02)
CE 489 Independent Study Projects (Term 2, AY 99-00, AY 00-01, AY 01-02, AY 02-03, AY04-05)
CE 491 Advanced Structural Analysis (Term 1, AY 02-03)
MS102, Ground Maneuver Warfare I, (Intersession, AY 02-03)

Technical Military Assignments:

Engineer Battalion Commander, 169th Engineer Battalion, Fort Leonard Wood, Missouri (1997-1999). Commander of an 1100 soldier battalion which trains over 3,000 soldiers a year in basic combat training and the individual skills of combat engineer, bridge crewmember, electrician, heavy equipment operator, surveying, soils analyst, carpenter, and draftsman.

Engineer Operations Officer and Personnel Officer, Fort Benning, Georgia (1991-1994). Responsible for the training, management, and operational readiness of a 500-person engineering battalion and a 1200-person engineer group. Planned, organized, and executed several engineering construction projects. Deployed to Somalia as part of Operation Restore Hope and to south Florida during Hurricane Andrew relief operations.

Engineer Company Commander, Fort Belvoir, Virginia (1983-1985). Leadership, operational, and maintenance responsibility for an engineering company of over 400 soldiers.

Platoon Leader and Civil Engineer, Karlsruhe, Germany (1978-1981). Platoon leader in charge of numerous troop construction projects throughout Germany, Greece, and Turkey. Civil Engineer for a 3,500 soldier engineer brigade responsible for design, planning, and oversight of numerous construction projects throughout Europe.

Technical Military Schooling:

Senior Service War College, 2004
Command and General Staff College, 1991
Engineer Officer Advanced Course, 1981
Engineer Officer Basic Course, 1978

6. *Consulting, patents, etc.*

None

7. *State in which registered.*

Commonwealth of Virginia, 1982

8. *Principal publications of last five years.*

Journal Articles:

Estes, A.C. and Foltz, S.D., "Estimating Infrastructure Serviceability Risk Using Visual Inspection Results." Journal of Reliability of Structures and Materials, 3(1) 2007, 1-18.

Estes, A.C. and Frangopol, D.M., "A Comparison of Load Rating to Reliability Analysis on Highway Bridges," Technical Note. Journal of Structural Engineering, ASCE 131(5), 2005. 843-847.

Estes, A.C., Frangopol, D.M., and Foltz, S.D. "Updating Reliability of Steel Miter Gates on Locks and Dams Using Visual Inspection Results," Engineering Structures, Elsevier, 26, 2004, 319-333.

Stewart, M.G., Estes, A.C., and Frangopol, D.M., "Bridge deck replacement for minimum expected cost under multiple reliability constraints," Journal of Structural Engineering, ASCE 130(9), 2004, 1414-1419.

Estes, A.C. and Frangopol, D.M., "Updating Bridge Reliability Based on Bridge Management Systems Visual Inspection Results," Journal of Bridge Engineering, ASCE 8(6), 2003, 374-382.

Estes, A.C. and Frangopol, D.M., "Bridge Lifetime System Reliability Under Multiple Limit States," Journal of Bridge Engineering, ASCE 6(6), 2001, pp. 523-528.

Estes, A.C. and Frangopol, D.M., "Using System Reliability to Evaluate and Maintain Structural Systems," Journal of Computational Structural Engineering, Engineering Press 1(1), 2001, 71-80

Estes, A.C. and Frangopol, D.M., "Minimum Expected Cost-Oriented Optimal Maintenance Planning of Deteriorating Structures: Application to Concrete Bridge Decks," Reliability Engineering and Structural Safety, Special Issue on Reliability Oriented Optimal Design, 73(3), 2001, pp. 281-291.

Estes, A. C. and Frangopol, D. M., "Repair Optimization of Highway Bridges Using System Reliability Approach," Journal of Structural Engineering, ASCE 125(7), 1999, pp. 766-775.

Frangopol, D.M. and Estes, A.C. "Optimum Lifetime Planning of Bridge Inspection and Repair Programs." Structural Engineering International, SEI, 9(3) August 1999, pp. 219-223.

Estes, A. C. and Frangopol, D. M., "RELSYS: A Computer Program for Structural System Reliability," Structural Engineering and Mechanics, 6(8), 1998, pp. 901-919.

Frangopol, D.M. and Estes, A.C., "Lifetime Bridge Maintenance Strategies Based on System Reliability." Structural Engineering International, SEI, 7(3), August 1997, pp. 193-198.

Frangopol, D. M., Lin, K. Y., and Estes, A. C., "Life-Cycle Cost Design of Deteriorating Structures", Journal of Structural Engineering, ASCE, 123(10), 1997, pp. 1390-1401.

Frangopol, D. M., Lin, K. Y., and Estes, A. C., "Reliability of Reinforced Concrete Girders Under Corrosion Attack." Journal of Structural Engineering, ASCE, 123(3), 1997, pp. 286-297.

Articles in Conference Proceedings:

Estes, A.C. and Foltz, S.D., "Two Alternative System Reliability Approaches to Serviceability Condition Assessment of Spillway Gate Systems on Dams." Proceedings of the 17th Analysis and Computation Specialty Conference: Life-Cycle Design and Management of Infrastructure, ASCE Structures Congress, St, Louis, May 18-21, 2006.

Estes, A.C. and Foltz, S.D., "Using Condition Assessment Data to Estimate Infrastructure Serviceability Risk," Proceedings of the Fourth International Workshop on Life-Cycle Cost Analysis and Design of Civil Infrastructure Systems, Cocoa Beach, Florida, May 2-5, 2005.

Estes, A.C., Frangopol, D.M., and Foltz, S.D., "Updating the reliability of engineering structures using visual inspection results," Proceedings of the Ninth International Conference on Applications of Statistics and Probability in Civil Engineering, ICASP9, San Francisco, California, July 6-9, 2003; in Applications of Statistics and Probability in Civil Engineering, Der Kiureghian, Madanat and Pestana, eds., Millpress, Rotterdam, 2, 1087-1092 and on associated CD-ROM.

Estes, A.C. and Frangopol, D.M., "A Comparison of Load Rating to Reliability Analysis on Highway Bridges," Proceedings of the 2003 Structures Congress and Exposition, ASCE, Seattle, Washington, May 29 – June 1, 2003.

Estes, A.C. and Frangopol, D.M., "Performance-Based Design of Maintenance Programs for Structures Based on Reliability and Cost," Proceedings of the 2003 Structures Congress and Exposition, ASCE, Seattle, Washington, May 29 – June 1, 2003.

Estes, A.C. and Frangopol, D.M., "Using PONTIS Bridge Management System Results to Update Time-Dependent Reliability of Highway Bridges," Proceedings of the 9th International Bridge Management Conference, Transportation Research Board, Orlando, Florida, April 28-30, 2003.

Stewart, M.G., Estes, A.C., and Frangopol, D.M., "Bridge Replacement Strategies and Life-Cycle Cost Analyses Under Multiple Limit States" Proceedings of the First International Conference on Bridge Maintenance, Safety, and Management," (IABMAS '02), Barcelona, Spain, July 14-16, 2002.

Estes, A.C., Frangopol, D.M., and Foltz, S., "Using Visual Inspection Results to Update Reliability Analyses of Bridge and Lock Structures," Proceedings of the Eighth International Conference on Structural Safety and Reliability (ICOSSAR '01), edited by R.B. Corotis, G.I. Schueller and M. Shinozuka, A.A. Balkema Publishers, Newport Beach, California, June 17-22, 2001

Estes, A.C., Frangopol, D.M., and Foltz, S., "Using Condition Index Inspection Results to Update the Reliability of Miter Gates on Dams," Structures 2001: Proceedings of the 2001 Structures Congress and Exposition, Session 16(4), ASCE/SEI, Washington D.C., May 21-23, 2001

Foltz, S.D., Patev, R.C., Estes, A. C., "Condition Evaluation for Reliability Assessment of Existing Structures," ASCE Proceedings of the Ninth Engineering Foundation Conference on Risk-Based Decision-Making in Water Resources, edited by Y Haimes, E. Stakhiv, and D. Moser, Santa Barbara, CA, October 15-20, 2000.

Estes, A.C. and Frangopol, D.M., "An Optimized Lifetime Reliability-Based Inspection Program for Deteriorating Structures," Proceedings of the 8th ASCE Joint Specialty Conference on Probabilistic Mechanics and Structural Reliability, PMC2000-025, Notre Dame, Indiana, July 24-26, 2000.

Frangopol, D.M., Enright, M., and Estes, A.C., "Integration of Maintenance, Repair, and Replacement Decisions in Bridge Management Based on Reliability, Optimization, and Life-Cycle Cost," 8th International Bridge Management Conference, Denver, Colorado, April 26-28, 1999, Preprints , Vol. II, Paper H-1,14 pages.

Frangopol, D.M., Enright, M., and Estes, A.C., "Life Extension of Deteriorating Highway Bridges Based on System Reliability and Cost." 5th International Conference on Short and Medium Span Bridges. Calgary, July 13-16, 1998.

Frangopol, D.M. and Estes, A.C., "Life Cycle Cost Analysis for Bridges: A Lifetime Reliability-Based Approach" Proceedings for the Structural Engineers World Congress (SEWC), published by Elsevier Science Ltd., San Francisco, July 18-23, 1998.

Estes, A. C., and Frangopol, D. M., "Optimum Reliability-Based Inspection/Repair Strategy Based on Minimum Expected Cost." Proceedings of ICOSSAR '97 – the 7th International Conference on Structural Safety and Reliability, Kyoto, Japan, 24-28 November 1997.

Frangopol, D.M., Estes, A.C., and Lin, K.Y. "Optimal Bridge Management Under Uncertainty in a Life-Cycle Perspective." Proceedings of the 13th U.S.-Japan Bridge Engineering Workshop, Tsukube, Japan, 29 Sept-3 Oct 1997.

Estes, A. C. and Frangopol, D. M., "Optimal Management of Bridge Lifetime Inspection to Balance Reliability and Cost," Proceedings of the 7th International Conference on Structural Faults and Repair, Edinburgh, Scotland, July, 1997. In Forde M.C. (ed), Extending the Life of Bridges, Engineering Technics Press, 1, 57-65.

Frangopol, D.M., Estes, A.C., and Lin, K.Y., "Life-Cycle and Reliability-Based Evaluation and Design of Deteriorating Structural Systems," Proceedings of the International Symposium on Optimization and Innovative Design '97 (OPID 97), Paper No. 148, Tokyo, Japan, July 28-30, 1997.

Frangopol, D. M. and Estes, A. C., "Optimization of Bridge Management Decisions Based on Reliability and Life-Cycle Cost," Proceedings for the International Conference on Structural Safety and Reliability, ESREL'97, Lisbon, Portugal, June 17-20, 1997.

Estes, A. C. and Frangopol, D. M., "System Reliability for Condition Evaluation of Bridges," IABSE Workshop on Evaluation of Existing Steel and Composite Bridges, March 3-4, 1997, IABSE-AIPC-IVBH Report, Vol. 76, Zurich, Switzerland, 1997, pp. 47-56.

Estes, A. C. and Frangopol, D. M., "Lifetime Repair Optimization of Highway Bridges Based on System Reliability and Cost," Building to Last: Proceedings of Structures Congress XV, April 13-16, 1997 in Portland, Oregon (Edited by L. Kempner and C.B. Brown), ASCE, New York, 1997, pp. 243-251.

Frangopol, D. M. and Estes, A. C., "Managing the Life-Cycle Cost and Safety of Highway Bridges," Proceedings of the Second International Symposium on Civil Infrastructure Systems, Hong-Kong/China, December 9-12, 1996.

Frangopol, D. M. and Estes, A. C., "Bridge Safety Management Based on Life-Cycle Cost," Proceedings of the 12th U.S.-Japan Workshop on Bridge Engineering, Buffalo, New York, October 29-30, 1996, Session 8, pp. 1-13.

Scholarly Publications/Activities Related to Teaching and Education:

Estes, A.C. and Estrada H. "Architectural Engineering Programs: Finding Common Ground" Paper 2007-870. 2007 ASEE Annual Conference and Exposition Proceedings, ASEE, Honolulu, June 24-27, 2007.

Estes, A.C. and Welch, R.W. "Orientation for New Department Heads" Paper 2007-871. 2007 ASEE Annual Conference and Exposition Proceedings, ASEE, Honolulu, June 24-27, 2007.

Estes, A.C. and Ressler, S.J. "Surviving ABET Accreditation: Satisfying the Demands of Criterion 3" Paper 2007-875. 2007 ASEE Annual Conference and Exposition Proceedings, ASEE, Honolulu, June 24-27, 2007.

Welch, R.W. and Estes, A.C. "Training for Adjunct Faculty" Paper 2007-1356. 2007 ASEE Annual Conference and Exposition Proceedings, ASEE, Honolulu, June 24-27, 2007.

Estes, A.C. and Welch, R.W. "Lowman Goes to the Movies" Paper 2006-1134. 2006 ASEE Annual Conference and Exposition Proceedings, ASEE, Chicago, June 18-22, 2006.

Estes, A.C. and Welch, R.W. "The Civil Engineering Faculty of the Future" Paper 2006-1110. 2006 ASEE Annual Conference and Exposition Proceedings, ASEE, Chicago, June 18-22, 2006.

Welch, R.W. and Estes, A.C. "Assessing Current Programs Against the New BOK" Paper 2006-1109. 2006 ASEE Annual Conference and Exposition Proceedings, ASEE, Chicago, June 18-22, 2006.

Meyer, K.F., Estes, A.C., Welch, R.W. and Winget, D. "Program Assessment the Easy Way: Using Embedded Indicators to Assess Program Outcomes" Paper 2006-1132. 2006 ASEE Annual Conference and Exposition Proceedings, ASEE, Chicago, June 18-22, 2006.

Welch, R.W. and Estes, A.C. "Systematic Program Assessment: Using Embedded Indicators and Closing the Feedback Loop" Best Assessment Processes VIII Symposium. Rose Hulman Institute of Technology, 26-28 February 2006.

Estes, A.C., Welch, R.W., and Ressler, S.J., "The Assessment of Teaching" Teaching Lessons Learned. Journal of Professional Issues in Engineering Education and Practice, ASCE 132 (1), January 2006, pp. 218-222.

Estes, A.C., Welch, R.W., and Ressler, S.J., "The ExCEED Teaching Model" Teaching Lessons Learned. Journal of Professional Issues in Engineering Education and Practice, ASCE 131 (4), October 2005, pp. 1-5.

Welch, R.W. and Estes, A.C., "Assessment of Squishier Outcomes: Open Ended Problem Solving Through Client-Based Projects," 2005 ABET Annual Meeting, Accreditation Board for Engineering and Technology, San Diego, October 27-28, 2005.

Welch, R.W., Ressler, S.J. and Estes, A.C., "A Model for Instructional Design" Teaching Lessons Learned. Journal of Professional Issues in Engineering Education and Practice, ASCE 131 (3), July 2005, pp. 168-171.

Estes, A.C. and Welch, R.W., "Board Notes and Questioning Two Time-Tested Techniques for Effective Teaching" 2005 ASEE Annual Conference and Exposition Proceedings, ASEE, Portland, Oregon, June 12-15, 2005.

Welch, R.W. and Estes, A.C., "Teaching Pedagogy 101," 2005 ASEE Annual Conference and Exposition Proceedings, ASEE, Portland, Oregon, June 12-15, 2005.

Meyer, K.M., Morris, M., Estes, A.C., Ressler, S.J., "How to Kill Two Birds with One Stone - Assigning Grades and Assessing Program Goals at the Same Time," 2005 ASEE

Annual Conference and Exposition Proceedings, ASEE, Portland, Oregon, June 12-15, 2005.

Estes, A.C., Welch, R.W., and Meyer, K.M. "Will Ten Pounds Fit into a Five Pound Bag?" 2005 ASEE Annual Conference and Exposition Proceedings, ASEE, Portland, Oregon, June 12-15, 2005.

Estes, A.C. and Ressler, S.J., "Peek Inside the ExCEED Teaching Workshop," National Civil Engineering Department Heads Meeting, Salt Lake City, May 21, 2005

Welch, R.W. and Estes, A.C., "Project Based Independent Study Capstone Course," Proceedings of the 2005 Structures Congress and Exposition, ASCE, New York City, April 20 – 24, 2005.

Estes, A.C., "Integrating Research into Education," Keynote Presentation, National Science Foundation Career Proposal Workshop, Construction Research Congress 2005, ASCE, San Diego, April 6, 2005.

Estes, A.C., "Shock and Awe in the Civil Engineering Classroom" Teaching Lessons Learned. Journal of Professional Issues in Engineering Education and Practice, ASCE 131 (1), January 2005, pp. 1-5.

Estes, A.C., Welch, R.W., and Ressler, S.J., "Questioning: Bringing Your Students Along on the Journey" Teaching Lessons Learned. Journal of Professional Issues in Engineering Education and Practice, ASCE 130 (4), October 2004, pp. 237-242.

Estes, A.C., "Course Portfolios: A Tool for Continuity and Assessment." Presentation at the 2004 ASCE Civil Engineering Conference and Exposition, Baltimore, October 20-23, 2004.

Estes, A.C., "The Role of Student Chapters in Improving Civil Engineering Programs." Presentation at the 2004 ASCE Civil Engineering Conference and Exposition, Baltimore, October 20-23, 2004.

Estes, A.C. and Welch, R.W., "Program Assessment: Conquering the Slow Loop." Best Assessment Processes VI Conference Proceedings, Rose-Hulman Institute of Technology, Terre Haute, Indiana, April 2004

Estes, A.C. and Ressler, S., "Teaching Assessment: How Do You Do It?," 2003 ASEE Annual Conference and Exposition Proceedings, ASEE, Nashville, Tennessee, June 22-25, 2003

Estes, A.C., "Trials of a Beginning ABET Evaluator: An Unauthorized Tell-All Biography," 2003 ASEE Annual Conference and Exposition Proceedings, ASEE, Nashville, Tennessee, June 22-25, 2003

Estes, A.C., LaChance, E. and Evans, M.D., "The Role of Student Chapters in Improving CE Programs," 2003 ASEE Annual Conference and Exposition Proceedings, ASEE, Nashville, Tennessee, June 22-25, 2003.

Welch, R.W. and Estes, A.C., "Client-Based Project For Any Senior - A Mark of Excellence For Any Program," 2003 ASEE Annual Conference and Exposition Proceedings, ASEE, Nashville, Tennessee, June 22-25, 2003.

Estes, A.C., "Teaching Assessment," Presentation at the 2002 ASCE Annual Conference and Exposition, Washington D.C., November 4-7, 2002.

Estes, A.C., and Klosky, J.L., "Designing Experiments in a Civil Engineering Curriculum," 2002 ASEE Annual Conference and Exposition Proceedings, ASEE, Montreal, Quebec, June 16-19, 2002.

Estes, A.C., LaChance, E.M., and Ressler, S.J., "K'nexercise: Introducing Students to the Key Participants in the Design-Construction Process," 2002 ASEE Annual Conference and Exposition Proceedings, ASEE, Montreal, Quebec, June 16-19, 2002.

Estes, A.C., Sibert, D.E. and Conley, C.H., "Using a Realistic Hands-On Laboratory Program to Enhance a Reinforced Concrete Design Course," 2002 ASEE Annual Conference and Exposition Proceedings, ASEE, Montreal, Quebec, June 16-19, 2002.

Hanus, J.P. and Estes, A.C., "Keep Them on the Edge of Their Seats: Bringing Drama into the Engineering Classroom," 2002 ASEE Annual Conference and Exposition Proceedings, ASEE, Montreal, Quebec, June 16-19, 2002.

Estes, A.C., Welch, R. and Ressler, S.J., "ExCEED Teaching Workshop: A Landmark Faculty Development Program," ASEE Zone 1 Conference Proceedings, ASEE, West Point, New York, April 5-6, 2002.

Estes, A.C. and Ressler, S.J., "EXCEED Teaching Workshop: Fulfilling a Critical Need," 2001 ASEE Annual Conference and Exposition Proceedings, ASEE, Albuquerque, New Mexico, June 24-27, 2001.

Other Scholarly Publications/Activities:

Estes, A.C., Foltz, S.D. and Chouinard, L.E., "Using Visual Condition Assessment Data for the Life-Cycle Management of Spillway Gate Systems on Dams." Infrastructure Reporting and Asset Management: Best Practices and Opportunities (Edited by A. Amekudzi and S. McNeil). American Society of Civil Engineers. Reston, Virginia, 2008.

Estes, A.C., "Using CI Ratings as an Estimate of the Probability of Failure." A Presentation to the USACE Asset Management Risk and Reliability Workshop." U.S. Army Corps of Engineers, Alexandria, Virginia, 15-18 August 2006.

Estes, A.C., "Condition Index Definitions Primer." A Presentation to the USACE Asset Management Risk and Reliability Workshop." U.S. Army Corps of Engineers, Alexandria, Virginia, 15-18 August 2006.

Messervey, T. B., Frangopol, D.M., and Estes, A.C., "Reliability-Based life-Cycle Bridge Management using Structural Health Monitoring." IABMAS 06, The Third Annual Conference on Bridge Maintenance, Management and Safety, Porto, Portugal, 13-16 July 2006.

Estes, A.C., Foltz, S.D., McKay, D., Estimating Risk from Spillway Gate Systems on Dams Using Condition Assessment Data. ERDC/CERL TR-05-Draft. Construction Engineering Research Laboratory Technical Report, Engineer Research and Development Command, U.S. Army Corps of Engineers, Washington D.C., June 2005.

Estes, A. C. and Frangopol, D.M., "Life-Cycle Evaluation and Condition Assessment of Structures," Chapter 36 in Structural Engineering Handbook, 2nd Edition (Edited by W-F. Chen and E. M. Lui), CRC Press, 2005.

Estes, A. C. and Frangopol, D.M., "Reliability-Based Condition Assessment," Chapter 2 in Structural Condition Assessment (Edited by R.T. Ratay), John Wiley & Sons, New York, 2005.

Estes, A.C. "Estimating Risk from Spillways on Dams Using Condition Assessment Data." Advanced Research Project. The Center for Naval Warfare Studies, Naval War College, Newport, R.I., 18 June 2004.

Estes, A.C., "Using Inspection Results to Update the Reliability of Miter Gates on Dams, Final Report," Prepared for: Construction Engineering Research Laboratory, Engineer Research and Development Center, U.S. Army Corps of Engineers, Champaign, IL, November, 2003.

Estes, A.C., Frangopol, D.M. and Foltz, S., "A Time-Dependent Reliability Approach to the Life Cycle Analysis of Miter Gates on Locks and Dams," Refereed Abstract and Conference Presentation, 2002 Structures Congress and Exposition, Technical Period 7, Paper [43-3], Structural Engineering Institute, Denver Colorado, April 4-6, 2002.

Frangopol, D.M., Miyake, M., Kong, J. S., Gharaibeh, E.S., and Estes, A.C., "Reliability and Cost Oriented Optimal Bridge Maintenance Planning." Chapter 10. Recent Advances in Optimal Structural Design (Edited by Scott Burns), Technical Committee on Optimal Structural Design, Structural Engineering Institute, ASCE, (2002).

Frangopol, D.M. and Estes, A.C., "Elaboration de Programmes Optimaux D'inspection et de Reparation Bases sur les Concepts de Fiabilite et de Cycle de Vie" Chapitre 20. (translated into French by C. Cremona), Application des Notions de Fiabilite a la Gestion des Ouvrages Existants (Edited by C. Cremona) Association Francaise de Genie Civil, 2002.

Estes, A.C. and Frangopol, D.M., "Bridge Lifetime System Reliability Under Multiple Limit States" Conference Presentation, New York City Bridge Conference 2001, Session 7A, October 29-30, 2001.

Farrell, L. and Estes, A.C., "Effective Leadership in a Garrison Environment," Engineer Bulletin, Dec 2001.

Frangopol, D. M. and Estes, A. C., "Optimum Design of Bridge Inspection/Repair Programs Based on Lifetime Reliability and Life-Cycle Cost." The Management of Highway Structures (Edited by P.C. Das) Thomas Telford, London, 1999.

Frangopol, D. M., Enright, M. P., Gharaibeh, E. and Estes, A.C., "Towards Optimal Reliability-Based Bridge Maintenance Planning." Case Studies in Optimal Design and

Maintenance Planning of Civil Infrastructure Systems (Edited by D. M. Frangopol) SEI/ASCE, New York, 1999, pp. 73-88.

Frangopol, D.M., Estes, A.C., Augusti, G., and Ciampoli, M., "Optimal Bridge Management Based on Lifetime Reliability and Life-Cycle Cost." Optimal Performance of Civil Infrastructure Systems (Edited by D.M. Frangopol) SEI/ASCE, New York, 1998, pp. 98-115.

Estes, A. C. and Frangopol, D. M., "Integration of Nondestructive Evaluation, Repair, Reliability, and Life-Cycle Cost into an Optimal Bridge Management Strategy." Recent Advances in Bridge Engineering (Edited by U. Meier and R. Betti), EPMA, Dübendorf and Zurich, Switzerland, pp. 377-384.

Frangopol, D. M. and Estes, A. C., "Optimization of Bridge Management Decisions Based on Reliability and Life Cycle Cost." Advances in Safety and Reliability (Edited by C. Guedes Soares), Pergamon, 2, 1997, pp. 1183-1194.

Estes, A. C., Frangopol, D. M., and Hearn, G., "Reliability-Based Optimum Bridge Repair Strategy," Probabilistic Mechanics & Structural Reliability. (Edited by D. M. Frangopol and M. D. Grigoriu), ASCE, New York, 1996, pp. 372-375.

Estes, A. C., "Life-Cycle Reliability-Based Optimal Repair Planning for Highway Bridges: A Case Study," Structural Reliability in Bridge Engineering (Edited by D.M. Frangopol and G. Hearn), Mc-Graw Hill, New York, 1996, pp. 54-59.

Estes, A. C., Frangopol, D. M., and Lin, K. Y., "Minimum Expected Life-Cycle Cost Design for Bridges," Reliability and Optimization of Structural Systems '96. (Edited by D. M. Frangopol, R. B. Corotis, and R. Rackwitz), Elsevier, Oxford, 1996.

Estes, A. C. and Frangopol, D. M., RELSYS: RELiability of SYStems Software Documentation, Report No. CU/SR-97/3, Structural Engineering and Structural Mechanics Research Series, Department of Civil, Environmental, and Architectural Engineering, University of Colorado, Boulder, 1997.

Estes, A. C., A System Reliability Approach to the Lifetime Optimization and Repair of Highway Bridges. Ph.D. Thesis 1997, Department of Civil Engineering, University of Colorado, Boulder, CO.

Estes, A. C., "New Mix Design for the Concrete Mobile," Engineer, Summer 1983.

Estes, A. C., "The Role of Combat Heavy Engineer Battalions in Nation Assistance," Master of Military Art and Science thesis, U.S. Army Command and General Staff College, Ft. Leavenworth, Kansas, June 1991.

Estes, A. C., "General Leslie Groves and the Atomic Bomb," Military Review, August 1992.

Estes, A. C., "Hurricane Andrew: Engineers in Action," Engineer, Spring, 1993.

Estes, A. C., "Bold Shift: An Engineer Partnership," Engineer, November 1993.

9. Scientific and professional societies of which a member.

American Society of Civil Engineers (ASCE)
Society of American Military Engineers (SAME)
American Society for Engineering Education (ASEE)
Structural Engineering Institute (SEI)
International Association of Bridge Maintenance and Safety (IABMAS)
International Association for Life-Cycle Civil Engineering (IALCCE)
Phi Kappa Phi
Order of the Engineer

10. Honors and awards:

Academic and Professional:

ASCE ExCEED Leadership Award, 2006
IABMAS Junior Researcher Award, 2002
USMA Phi Kappa Phi Scholarship Award, 2002
NSPE Federal Engineer of the Year (Top ten finalist), 1998
TRADOC Engineer of the Year, 1998
Dean's Award, C.W. Post MBA Program, 1989
Distinguished Cadet, United States Military Academy, 1978
Dean's List, United States Military Academy, 1974-1978

Military:

Legion of Merit
Meritorious Service Medal (6 Awards)
Army Commendation Medal (2 Awards)
Army Achievement Medal (2 Awards)
Humanitarian Service Medal
Armed Forces Expeditionary Medal

Other:

None

11. Subjects or courses during the most recent academic year, by terms. Give hours per week of lecture, recitation, and laboratory, and number of sections if more than one. Designate whether courses were day, evening, extension, graduate, or other type.

Fall Quarter: ARCE 227, Structures III, day, lecture/recitation, 2.0 hrs/wk (1 section).

Spring Quarter: ARCE 227, Structures III, day, lecture/recitation, 4.0 hrs/wk (2 sections).

12. Other assigned duties performed during the academic year, with average hours per week. Indicate which carry extra compensation.

National Service:

Member, ASCE/SEI Technical Committee on Safety of Buildings (AY 06-08)
Member, ACSE Educational Activities Committee (AY 07-08)
Member, Scientific Committee, First International Symposium on Life-Cycle Civil Engineering (IALCCE'08) (AY 07-08)
Member, International Association for Life-Cycle Civil Engineering (IALCCE) (AY 06-08).
Member, AEI Academic Council (AY 06-08)
Member, ASCE Department Heads Council Executive Committee (DHCEC), Representative for Northeast Region (AY 05-07), AEI Representative (AY 07-08)
Member, Scientific Committee, Third International Conference on Bridge Maintenance, Safety and Management IABMAS 06, Porto, Portugal (AY 05-06)
Technical Editor, *Structure and Infrastructure Engineering* (IABMAS) (AY 03-08)
Member, ASCE/SEI Technical Committee on Optimum Structural Design, (AY 99-06)
Member, ASCE Committee on Faculty Development, (AY 01-05); Chair (AY04); Corresponding Member (AY 05-08)
Member, Subcommittee on System Reliability and Optimization, International Association for Structural Safety and Reliability (IASSAR) (AY 03-06)
Member, Steering Committee for Civil Works O&M Management Tools, U.S. Army Corps of Engineers, (AY 00-01)
ASCE Curriculum subcommittee for CAP3, (AY 04-06)
Evaluator, ABET, Evaluated CE Program at Drexel University (2007), University of Kansas (2006), Western Michigan University (2005), Boise State (2004), Widener University (2002) served as Observer for U Mass -- Amherst (2001), appointed by ASCE, 2 hours/month

University Service:

Member, USMA Teaching Committee, (AY 04-06)
Officer Representative, Army Hockey Team (AY 00-06)
Member, USMA Engineering and Technology Goal Team, (AY 00-02)
Member, USMA Admissions Committee (AY 00-02, 05)
CE Program Director, USMA ABET Committee (AY 01-06)

Department Service:

Department Head, Cal Poly Architectural Engineering, (AY 06-08)
Director, Civil Engineering Division, (AY 00-06)
Department Academic Counselor, (AY 99-06)
Member, Search Committee, Civilian Professor (AY 00-01)
Member, Search Committee, Academy Professor (AY 01-02)
Member, Teaching Awards Committee (AY 99-02, 04-05)
Conference Chairman, ASCE Student Regional Conference, West Point, NY (28-29 April 2001)

13. *Specific programs in which faculty member has participated to improve teaching and professional competence during last five years.*

Department Head Training Workshop. CE Department Head Annual Conference, Fort Collins, Colorado, May 20-23, 2007. Served as content presenter and organizer

Fundamental of Engineering Exam Standard Setting Study, National Council of Examiners for Engineering and Surveying (NCEES), Atlanta, 8 – 10 December 2005. Served on the committee that validated the updated F. E. examination.

Asset Management for Civil Works Infrastructure Workshop, U.S. Army Corps of Engineers. Alexandria, Virginia, August 23-24, 2005. Participated with members of Army Corps of Engineers, NASA, Bureau of Reclamation, and Dept. of the Interior to discuss the management of infrastructure.

A Peak Inside the ExCEED Teaching Workshop, National Civil Engineering Department Head Conference, Salt Lake City, May 9, 2005. Planner and Co-conductor of a four hour workshop for CE Department Heads.

Student/Educator/Practitioner Teaching and Learning Seminar, ASCE National Conference, Washington D.C., November 2002. Conducted seminars on Preparing a Class and Questioning during this two-day pre-conference workshop.

ExCEED Engineering Workshop, West Point, July 2002 and July 2005. Served as the Program Coordinator. managed, administered, coordinated the week-long teaching workshop. Taught a demonstration class. Conducted seminars on Teaching and Learning, Preparing a Class, Questioning, and Design of Instruction.

ExCEED Engineering Workshop, University of Arkansas, July 2002, July 2003, July 2004, July 2005, July 2006. Served as senior mentor for a small group, taught a demonstration class, and conducted a seminar on Design of Instruction.

ExCEED Engineering Workshop, University of Northern Arizona, July 2007. Served as senior mentor for a small group, taught a demonstration class, and conducted a seminar on Design of Instruction.

ExCEED Engineering Workshop, West Point, July 2000, July 2001, July 2004, July 2006, July 2007. Served as seminar leader and key planner in a week-long conference attended by engineering faculty from across the country on improving teaching techniques in engineering education. Conducted seminars on Communication Skills, Preparing a Class, and Design of Instruction. Taught a demonstration class.

Instructor Summer Workshop, June-July 1999, 2000, 2001, 2002, 2003, 2004, 2005. Primary faculty development program in the CME Department. Workshop senior leader in charge of demonstration classes, evaluation of student classes, supporting learning activities, presentation of selected seminars, and ensuring new faculty members are prepared to teach in the Fall.

THE Distance Learning Workshop, November 3-4, 2000, Albuquerque, New Mexico. Attendee at workshop which presented core instructional skills and instructional design

principles necessary to teach on the World Wide Web and Interactive Television.
Sponsored by Center for Educational Development of New Mexico State University.

Construction Management of Steel Construction Faculty Workshop, Chicago, Illinois, October 12, 2000. Attended a one-day workshop sponsored by the American Institute of Steel Construction aimed at faculty involved in teaching construction, construction management, and/or capstone courses.

ExCEED Engineering Workshop, West Point, July 1999. Served as senior mentor in a week-long conference attended by engineering faculty from across the country on improving teaching techniques in engineering education.

14. *Special duties of co-op faculty (coordinators).*

N/A