

## **NELSON, James K., Jr.**

### ***Current Appointment and Academic Rank:***

Assistant Vice Chancellor and Director of Special Academic Initiatives,  
Texas A&M University System  
Civil Engineering Professor of Instruction, Texas A&M University

### ***Office Address:***

Texas A&M University System  
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### ***Home Address:***

5115 Whistling Straits Dr.  
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### ***Family and Personal Information:***

Spouse: Karen M. Nelson (Married 35 years)  
Children: One child currently studying at Texas A&M and University of Leicester  
Born: Evanston, Illinois, January 22, 1952

### ***Education:***

Ph.D., Civil Engineering, University of Houston, 1983  
M.S., Civil Engineering, University of Houston, 1976  
B.C.E., Civil Engineering, University of Dayton, 1974

### ***Professional Registration:***

Professional Engineer, Texas, 1979, No: 44821  
Professional Engineer, California, 1980, No: C32484  
Professional Engineer, South Carolina, 1992, No: 14673  
Chartered Engineer, Chartered Marine Engineer, United Kingdom, 1998, No. 603146

### ***Professional Society Membership:***

Fellow, American Society of Civil Engineers (ASCE)  
Member, Institute of Marine Engineering, Science and Technology (IMAREST, UK)  
Member, American Society for Engineering Education (ASEE)  
Member, SAFE Association (SAFE)

### ***Professional Experience:***

#### ***Academic***

Texas A&M University System, Assistant Vice Chancellor and Director of Special Academic Initiatives,  
June 2016 to Present  
Texas A&M University, Director of Engineering Academic Initiatives, Jan 2016 to May 2016  
University of Texas at Tyler, Dean of Engineering, August 2006 to January 2016  
University of Texas at Tyler, Chair of Civil Engineering, 2005 to 2006  
University of Texas at Tyler, Interim Chair of Mechanical Engineering, 2006  
Western Michigan University, Professor and Chair, Civil and Construction Engineering, 2002 to 2005  
Western Michigan University, Chair, Materials Science and Engineering, 2002 to 2005

Western Michigan University, Chair, Industrial Design, 2002 to 2005  
Clemson University, Professor and Chair of Civil Engineering, 1998 to 2002  
Clemson University, Professor of Civil Engineering and Program Director, 1995 to 1998  
Clemson University, Associate Professor of Civil Engineering and Program Director, 1989 to 1995  
Texas A&M University, Assistant Professor of Civil Engineering, 1983 to 1989  
Texas A&M University, Lecturer of Civil Engineering, 1981 to 1983  
Texas A&M University at Galveston, Lecturer of Maritime Systems Engineering, 1979 to 1981  
University of Houston, Lecturer of Civil Engineering, 1977 to 1978

***Industrial***

Exxon Company USA, Senior Engineer, 1980 to 1981  
The Offshore Company, Project Engineer, 1977 to 1980  
Robert Reid Consulting Engineer, Civil Engineer, 1976 to 1977  
Brown & Root, Associate Engineer, 1975 to 1976

***Consulting Experience:***

Verhoef Access Technology, 2015, Review structural design and conformance for access gangways to be constructed in Corpus Christi, TX.  
Verhoef Access Technology, 2013, Review structural design and conformance for two access gangways to be constructed in California.  
Lewis, Brisbois Bisgaard & Smith, LLC., July 2010 to May 2013, Served as an expert witness in a case involving and accident with lifeboat hooks.  
National Concrete Masonry Association, July 2012, Contract to update the NCMA Masonry Design Software to include the 2011 MSJC and 2012 IBC design codes and to add pilaster design capability, with Dr. Russell H. Brown.  
National Concrete Masonry Association, July 2009, Contract to update the NCMA Masonry Design Software to include the 2008 MSJC and 2009 IBC design codes, with Dr. Russell H. Brown.  
National Concrete Masonry Association, May 2004, Contract to develop a 32-bit Windows® application for the design of concrete masonry columns, add clay masonry to the design system, and update the user interface to include specification of the unit sizes; with Dr. Russell H. Brown.  
National Concrete Masonry Association, May 2000, Contract to develop a 32-bit Windows® application for the design of concrete masonry shear walls, with Dr. Russell H. Brown.  
National Concrete Masonry Association, November 1997, Contract to develop a 32-bit Windows® application for the design of concrete masonry walls, with Dr. Russell H. Brown.  
National Concrete Masonry Association, April 1997, Contract to develop a 32-bit Windows® application for the design of masonry and concrete lintels for masonry structures, with Dr. Russell H. Brown.  
Fr. Fassmer, GmbH, June 1992, Special analysis and recommendation regarding the launch angle for an 8.5 meter free-fall lifeboat.  
Provosty, Sadler, & DeLaunay, May 1990 to December 1991, Served as an expert witness in a case involving a conventional lifeboat.  
Hakco Precast, June 1985 to January 1986, Design of precast concrete cladding for the 26 story First National Bank office tower in Shreveport, Louisiana.  
City of Tyler, July 1985, Evaluation of cracking in prestressed concrete tennis courts and recommendations for repair.

## ***Major Education Initiatives:***

### ***New Program Start-Up***

Leading the development of the academic components of the RELLIS Campus Initiative for Texas A&M University System.

University Project Coordinator-McAllen, leading the effort to offer selected Texas A&M University programs of study at a site in McAllen, TX, which includes a new building, January 2016 to present.

Lead the development and implementation of engineering programs at Texas A&M University-San Antonio in collaboration with Texas A&M University-Central Texas, January 2016 to February 2017.

Lead implementation of the Houston Engineering Center for offering UT Tyler engineering degree programs in greater Houston area in cooperation with Houston Community College.

Implemented the Department of Construction Management at The University of Texas at Tyler when that degree program was moved to the College of Engineering and Computer Science, 2010.

Implemented the Department of Civil Engineering at The University of Texas at Tyler, including the bachelor's and master's degree programs, and served as founding chair, 2005.

Implemented the Bachelor of Science and Master of Science in Civil Engineering degree programs in the Department of Civil and Construction Engineering at Western Michigan University and served as chair, 2002.

Implemented the Clemson University Graduate Engineering Programs at the Citadel at Clemson University and served as founding director, 1989.

### ***New Building Initiatives***

Texas A&M University System Agriculture and Workforce Education Complex at RELLIS (Phase 1): Served as liaison of the user group for developing the program of requirements and construction interface. Design/Build project. \$15,000,000 with 42,000 gsf. January 2018 to Present.

Texas A&M University System Academic Complex at RELLIS (Phase 1a): Served as liaison of the user group for developing the program of requirements and construction interface. Design/Build project. \$42,000,000 with 67,000 gsf. April 2017 to Present.

Texas A&M Higher Education Center in McAllen: Served as liaison of the user group for developing the program of requirements and construction interface. Design/Build project. \$40,000,000 with 68,000 gsf. January 2016 to Present.

North Building of the UT Tyler Engineering Complex: Served as liaison of the user group for developing the program of requirements and construction interface for completion of the shelled building. Design/Build project. Construction was completed early and under budget. 80,000 gsf. October 2006 to January 2008.

### ***Statewide Education Reform***

Chair the Texas Higher Education Coordinating Board committee to revise and update the Engineering Field of Study, 2015.

Testified before the Texas House Higher Education Committee regarding best practices to enhance migration of students from community colleges to baccalaureate engineering programs, 2012.

Lead state-wide implementation of the Associate of Science in Engineering Science degree program to facilitate migration of engineering students from community colleges to the baccalaureate engineering degrees. 2011.

Testified before the Texas Senate Higher Education Committee regarding best practices to enhance migration of students from community colleges to baccalaureate engineering programs, June 2010.

Chair the Texas Higher Education Coordinating Board committees to develop statewide articulation compacts in engineering, chemistry, biology, computer information systems, mathematics, management information systems, and business, 2010 to 2013.

Served on the Texas Higher Education Coordinating Board committee to develop a statewide mechanical engineering articulation compact, 2009

Testified before a Texas Senate Higher Education Committee regarding proposed legislation to enhance migration of students from community colleges to baccalaureate institutions, 2009.

Appointed by the State Board of Education to serve on the writing team for the TEKS (Texas Essential Knowledge and Skills) for Career and Technical Education courses in the STEM area, 2008

***Professional Society Service:***

Session Chair, Indo-Global Education Conference, Hyderabad, India, November 2015.

Serve as a member of the coordinating committee for the Engineering Deans Institute of ASEE in spring 2012.

Member, representative of ASEE on the NCEES Engineering Education Task Force, December 2009 through January 2010.

Session Chair, ASEE National Conference and Exposition, June 2006

Chair, Curriculum Committee of the ASCE Committee on the Academic Prerequisites for Professional Practice, 2004 to 2007 (member from 2003)

Member, ASCE Committee on the Academic Prerequisites for Professional Practice, 2004 to 2007

Member, Accreditation Committee of the ASCE Committee on the Academic Prerequisites for Professional Practice, 2003 to 2007

Session Chair, ASEE National Conference and Exposition, June 2005

Member, ASCE Task Committee for Faculty Licensure, 2004

Member, Validation and Fulfillment Committee of the ASCE Committee on the Academic Prerequisites for Professional Practice, 2004 to 2005

Proceedings Editor, ASEE Southeastern Section, 1999 to 2002

Chair, Local Arrangements Committee, 1999 ASEE Southeastern Section Conference, hosted by Clemson University College of Engineering and Science

Member, Editorial Review Board, *CE Computing Review*, ASCE, 1989-1994

Chairman, Committee on Electronic Computation, Structural Division, ASCE, 1987-1991

Member, Organizing Committee for Structures Congress '89, ASCE, 1987-1989

Chairman, Ninth Conference on Electronic Computation, Committee on Electronic Computation, ASCE, 1984 to 1986

Member, Publications Committee of the Structural Division, ASCE, 1984-1987

President, Brazos Branch, ASCE, 1984-1985

Publications Secretary, Committee on Electronic Computation, ASCE, 1983-1987

Vice-President, Brazos Branch, 1983-1984

Chairman, Subcommittee on Conferences, Committee on Electronic Computation, ASCE, 1983-1987

Program Chairman, Eighth Conference on Electronic Computation, ASCE, 1981-1983

Member, Organizing Committee for Structures Congress '82, ASCE, 1981-1982

Member, Task Committee on Finite Element Idealization Guidelines, Committee on Electronic Computation, ASCE, 1979-1986

Member, Subcommittee on Automated Analysis and Design, Committee on Electronic Computation, ASCE, 1979-1991

### **Books and Monographs**

McCormac, Jack C. and James K. Nelson, *Reinforced Concrete Design*, 6<sup>th</sup> Edition, John Wiley & Sons, 2004.

Nelson, James K. and Jack C. McCormac, *Structural Analysis: Using Classical and Matrix Methods*, 3<sup>rd</sup> Edition, John Wiley & Sons, 2003.

McCormac, Jack C. and James K. Nelson, *Structural Steel Design: LRFD Method*, 3<sup>rd</sup> Edition, Prentice-Hall, 2002.

McCormac, Jack C. and James K. Nelson, *Structural Analysis: A Classical and Matrix Approach*, 2<sup>nd</sup> Edition, Addison Wesley Longman Publishers, 1996.

Meyer, C., editor, *Finite Element Idealization*, Task Committee Report, ASCE Committee on Electronic Computation, co-author of Chapter A4, "Post-Processing and Interpretation of Results," 1987.

### **Refereed Publications:**

Willis, Vicki L, Nelson, James K., Reinhold, Timothy A., and Verhoef, Joop, "Anticipated Performance of Free-Fall Lifeboats in a High Wind Environment," *Journal of Wind Engineering and Industrial Aerodynamics*, Volume 83, pp. 479-492, November/December 1999, and *Proceedings of the Fourth Asia Pacific Symposium on Wind Engineering*, Gold Coast, Australia, July 1997.

Willis, Vicki, L, Schiff, Scott D., Rosowsky, David V., and Nelson, James K., "Lessons Learned from the Structural Retrofit of an Historic Charleston House," *The Use of and Need for Preservation Standards in Architectural Conservation*, ASTM STP 1355-L American Society for Testing and Materials, 1999.

Nelson, James K., Waugh, Peter J., and Schweickhardt, Alan J., "Comparison of Dynamic Response Criteria, SRSS Criteria and the Hybrid III Dummy as Indicators of Injury Potential in Free-Fall Lifeboats," *Ocean Engineering: An International Journal of Research and Development*. 1996.

Nelson, J. K., Fallon, D. J., and Hirsch, T. J., "Effects of CG Location on the Launch Behavior of Free-Fall Lifeboats," *Journal of Offshore Mechanics and Arctic Engineering*, ASME, February 1995.

Nelson, James K., Regan, Nancy B., Khandpur, Rajiv, Landsburg, Alexander C., and Markle, Robert L., "Implementation of Free-Fall Lifeboats on Ships," *Journal of Marine Technology*, Society of Naval Architects and Marine Engineers, Vol. 31, No. 4, pp. 269-277, October, 1994.

Nelson, J. K., Markle, R. L., and Khandpur, R., "Evaluation of Increased Safety through Use of Free-Fall Lifeboats," *Journal of the SAFE Association*, Volume 21, Number 2, May-June 1991. Also submitted as an Information Paper by the United States to the 22<sup>nd</sup> Session of the Lifesaving, Search and Rescue Subcommittee of the International Maritime Organization.

Nelson, J. K., Hirsch, T. J., and Phillips, N. S., "Evaluation of Occupant Accelerations in Lifeboats," *Journal of Offshore Mechanics and Arctic Engineering*, ASME, November, 1989.

Nelson, J. K., Hirsch, T. J., and Phillips, N. S., "Occupant Response in Free-Fall Lifeboats," *Journal of the SAFE Association*, SAFE, pp. 42-56, Fall Quarter, 1988.

- Nelson, J. K., Hirsch, T. J., and Magill, J. M., "Measured Accelerations on Free-Fall Lifeboats," *Journal of Offshore Mechanics and Arctic Engineering*, ASME, Vol. 110, No. 3 pp. 226-231, August, 1988. Also published in *Proceedings of Sixth International Symposium on Offshore Mechanics and Arctic Engineering*, Houston, Texas, March, 1987.
- Nelson, J. K., and Graff, W. J., "Categorizing Component Failure in Offshore Platforms," *Journal of Waterways, Ports, Coastal, and Ocean Engineering*, ASCE, Vol. 113, No. 6, pp. 623-635, 1987.
- Nelson, J. K., and Morgan, J. R., "Hurricane Damage on Galveston's West Beach," *Journal of Structural Engineering*, ASCE, Vol. 111, No. 9, pp. 1993-2007, 1985.
- Nelson, J. K., and Beason, W. L., "An Indicator of Residential Roof Strength in Wind," *Journal of Structural Engineering*, ASCE, Vol. 111, No. 9, pp. 2049-2053, 1985.
- Fehrenkamp, K, Morgan, J. R., and Nelson, J. K., "Equivalent Nonlinear Spring for Catenary Moorings," *Journal of Structural Engineering*, ASCE, Vol. 110, No. 10, pp. 2541-2546, 1984.
- Jones, H. L., and Nelson, J. K., "Optimum Design of Spread Moorings," *ASME Transactions Journal of Energy Resources Technology*, Vol. 104, March, 1982.
- Nelson, J. K., and White, A., "Computer Aided Instruction in Structural Analysis," *Journal of Computers and Structures*, Vol. 10, Nos. 1/2, 1979. Also published in *Trends in Computerized Structural Analysis and Synthesis*, A. K. Noor, editor, Washington DC, October, 1978.

### **Conference Proceedings (Reviewed):**

- Nelson, James K., John A. Barton, James R. Hallmark, and Billy C. Hamilton, "RELLIS: A Transformational Initiative for Collaborative Education and Research," *Proceedings of the Annual Conference of the American Society for Engineering Education*, Columbus, OH, June 2017.
- Subramanyam, Sreelatha A., David Beams and James K. Nelson, "Virtual Electronics Laboratory for Effective On-Line Education in Electrical Engineering," WCEE 2015 Congress, November 2015.
- Subramanyam, Sreelatha A., David Beams and James K. Nelson, "Enhancing On-Line Electrical Engineering Undergraduate Education Through a Virtual Laboratory," 2015 for ASEE Zone III Conference, 2015.
- Brown, Russell H, Nelson, James K., Thompson, Jason, and Graber, Dennis, "Software for the Structural Design of Masonry—Version 6," Twelfth North American Masonry Conference, May 2015.
- Fridley, Kenneth J., Hall, Kevin D., and Nelson, James K., "The Raise the Bar Initiative: Response of Three Curricula to ASCE's Educational Recommendations," *Proceedings of the Annual Conference of the American Society for Engineering Education*, San Antonio, TX, June 2012.
- Nelson, James K., Smith, Mary E., and Ellis, Martha M., Associate of Science Degree Program to Facilitate Transfer of Students from 2-Year to 4-Year Engineering Programs, *Proceedings of the Annual Conference of the American Society for Engineering Education*, San Antonio, Texas, June 2012.
- Smith, Mary E., Nelson, James K., and Gardner, David W., "Tuning Engineering Programs in the Context of ABET Accreditation," *Proceedings of the Annual Conference and Exposition, American Society for Engineering Education*, Vancouver, British Columbia, June 2011.
- Lemoine, Kevin, Nelson, James, Peterson, Lynn, Sells, James and Smith, Mary, "Facilitating Transfer of Students from 2-Year to 4-Year Engineering Programs," *Proceedings of the Annual Conference and Exposition, American Society for Engineering Education*, Vancouver, British Columbia, June 2011.
- Nelson, J. K., Smith, M. E., and Gardner, D. W., "State of Texas – Voluntary Mechanical Engineering Transfer Compact," 2010 Conference of the National Institute for the Study of Transfer Students on Creating Pathways for STEM Transfer Student Success, Asheville, North Carolina, September 2010.

- Nelson, J.K., Geiger, W., Odell, M. and Trampus, K., "A Vision for P-16 STEM Education and the Relationship Between Secondary and Higher Education in STEM Education," Proceedings of the Annual Conference and Exposition, American Society for Engineering Education, Pittsburgh, Pennsylvania, June 2008.
- Nelson, James K., Ronald Welch, Charles Glagola, and Michael Robinson, "An Inspirational Vision for Civil Engineering in 2025: The BOK and Future Directions for Civil Engineering Curricula," Proceedings of the Annual Conference, American Society for Engineering Education, Honolulu, Hawaii, June 2007.
- Smerdon, Ernie J., and Steven Ressler, James Nelson, James O'Brien, "Progress on Raising the Bar—Issues Related to the Prohibition on Dual-Level Accreditation of Engineering Programs," Proceedings of the Annual Conference, American Society for Engineering Education, June 2006.
- Butt, S.E., Fredericks, T.K., Nelson, J.K., Kumar, A.R., Bellinger, T., "Aggregating Pressure Maps: A Case Study," *The Proceedings of the XIX Annual International Occupational Ergonomics and Safety Conference*, Las Vegas, Nevada, 2005.
- Walesh, Stuart G., and James K. Nelson, "Foundation of the New Civil Engineering Accreditation Criteria," Proceedings of the Annual Conference, American Society for Engineering Education, June 2005.
- Nelson, James K. and Yehia, Sherif, "Structural Analysis Courses: Computers or Fundamentals," Proceedings of the 2004 Annual Conference, American Society for Engineering Education, June 2004.
- Nelson, James K., Abudayyeh, Osama, Williams Molly W., and Tsang, Edmund, "A Civil Engineering Curriculum for the 21st Century," Proceedings of the 2003 Annual Conference, American Society for Engineering Education, June 2003.
- Brown, Russell H., Nelson, James K., and Graber, Dennis, "Software for the Allowable Stress and Strength Design of Concrete Masonry Walls, Shear Walls and Lintels," *Proceedings of the 9<sup>th</sup> North American Masonry Conference, Clemson, SC, June 2003.*
- Akins, Robert E. and Nelson, James K., "Integration of Engineering Measurement and Analysis into Civil Engineering Programs," *Proceedings of the 2000 Southeastern Section Meeting*, American Society for Engineering Education, April 2000.
- Brown, Russell H., Nelson, James K., and Greenwald, Jeffrey H., "Software for the Design of Concrete Masonry Walls and Lintels," *Proceedings of the 8<sup>th</sup> North American Masonry Conference, Austin, TX, June 1999.*
- Nelson, James K., Reilly, David, and Brown, Russell H. "Teaching Engineering to Cyber Children" *Proceedings of the 1998 Southeastern Section Meeting*, American Society for Engineering Education, April 1998.
- Willis, Vicki L, Nelson, James K., and Schiff, Scott D. "Dissemination of University Research via the WEB," *Proceedings of the 1998 Southeastern Section Meeting*, American Society for Engineering Education, April 1998.
- Sciaudone, Jeffrey C., Reinhold, Timothy A., and Nelson, James K., "Development of a Methodology for Evaluating Wind-Borne Debris Impact Forces," *Proceedings of the Fourth Asia Pacific Symposium on Wind Engineering*, Gold Coast, Australia, July 1997.
- Nelson, James K. and Scott, Jeffery J. Restructured Introduction to Programming for Engineering," *Proceedings of the 1997 Southeastern Section Meeting*, American Society for Engineering Education, April 1997.
- Nelson, James K., Fallon, Dennis J., and Brown, Russell H., "Re-Engineering the Civil Engineering Classroom," *Proceedings of the 1996 Southeastern Section Meeting*, American Society for Engineering Education, April 1996.
- Nelson, J. K., "Relationship of Parameters Affecting the Behavior of Lifeboats Launched by Free-Fall," *Proceedings of Offshore Safety: Protection of Life and the Environment*, Institute of Marine Engineers, London, May 1992.
- Nelson, J. K., Fallon, D. J., Verhoef, J., and Hirsch, T. J., "Effects of Mass Distribution on Free-Fall Lifeboat Behavior," 1991 Offshore Mechanics and Arctic Engineering Conference, Stavanger, Norway, June, 1991.

- Nelson, J. K., Fallon, D. J., and Hirsch, T. J., "Mathematical Modeling of Free-Fall Lifeboat Behavior," 1991 Offshore Mechanics and Arctic Engineering Conference, Stavanger, Norway, June 1991.
- Nelson, J. K., Hirsch, T. J., and Wang, J., "Determining Kinematics of Free-Fall Lifeboats From Measured Accelerations," 1989 Offshore Mechanics and Arctic Engineering Conference, The Hague, March, 1989.
- Nelson, J. K., Womble, J. E., and Lutes, L. D., "Redundancy/Reliability Relationship in Platform Structures," 1989 Offshore Mechanics and Arctic Engineering Conference, The Hague, March, 1989.
- Nelson, J. K. and Graff, W. J., "A Method for the Evaluation of the Consequences of Component Failure in Jacket Type Offshore Platform Structures," *Proceedings of the 11th IFIP Conference on System Modeling and Optimization*, Copenhagen, Denmark, October, 1983.

### ***Invited Lectures:***

- Nelson, James K., "Reducing Lifesaving Appliance Accidents and the Current Regulatory Environment," Keynoted dinner presentation at the First Hatecke Service Providers Networking Meeting, Wischafen, Germany, May 2015.
- Nelson, James K. and Martin Slann, "A Case for Energy Independence in the Global Environment," Tyler Greater Issues Program, Spring 2014.
- Nelson, James K. and Gregg Lassen, "Energy and the Economy: Issues Related to Energy, Energy Independence and the US Economy," Tyler Greater Issues Program, Spring 2009.
- Nelson, James K., "Future of Civil Engineering Education," An Invited Breakfast Presentation, American Society of Civil Engineers, East Texas Branch, Tyler, Texas, April 2007.
- Nelson, James K., "Development and Behavior of Free-Fall Lifeboats," An invited lecture at the Marine Research Center, St. John's, Newfoundland, Canada, June 2004.
- Nelson, James K., "Implications of the IBC Building Code in Design Practice," Presented to the Society of Professional Engineers Spring Meeting, Asheville NC., June 2001.
- Nelson, James K., "Challenges Utilizing Computer Technology in the Engineering Classroom," Keynote Address at the 1999 ASCE Southeastern Section Annual Meeting, Clemson SC., April 1999.
- Nelson, James K., "Development and Behavior of Free-Fall Lifeboat Systems," An invited lecture at the Ship Research Institute of the Ministry of Transport of Japan, Tokyo, Japan, March 1997.
- Nelson, J. K., "Influence and Impact of Microcomputers," Keynote address at dedication of R. F. Weiss Microcomputer Laboratory, University of Dayton, Dayton, Ohio, April, 1987.

### ***Conference Proceedings (Unreviewed):***

- Nelson, James K. and Tonna L. Brooks, "International Collaboration to Develop Global-Ready Students," Indo-Global Education Summit 2015, Hyderabad, India, November 2015.
- Nelson, J. K., O. Abudayyeh, E. Tsang, and T. J. Siller, "The BOK and Program Assessment," ASCE Fall Convention, Baltimore, MD, October 2004.
- Willis, Vicki L., Schiff, Scott D., Rosowsky, David V., and Nelson, James K., Jr., "Retrofit of an Historic Charleston House Against Natural Hazards: a Case Study," Structural Engineers World Congress, San Francisco, July 18-23 1998.
- Markle, Robert L. and Nelson, James K., "The 1995 Ro-Ro Ferry Safety Initiatives: Escape and Survival," *Proceedings of SASMEX International '96*, Redhill, United Kingdom, April 1996
- Nelson, James K., Reinhold, Timothy A, and Verhoef, Joop, "Preliminary Performance of Free-Fall Lifeboats in Wind," *Proceedings of the 2nd International Conference and Exhibition on Maritime Technology*, Singapore, November 1995



- Nelson, James K., and Markle, Robert L., "Feasibility of Using Free-Fall Lifeboats on Passenger Ships and Ro-Ro's," *Proceedings of the 2nd International Conference and Exhibition on Maritime Technology*, Singapore, November 1995
- Schimizza, R. R., Nelson, J. K., Amirkhanian, S. N., and Murden, J. A., "Use of Waste Rubber in Light-Duty Concrete Pavements," *Infrastructure: New Materials and Methods of Repair*, Proceedings of the Third Engineering Materials Conference, ASCE, November, 1994.
- Nelson, J. K., "To 'C' or not to 'C': The Language of Choice for Engineering Education," *Proceedings of the 1991 Southeastern Conference of the American Society for Engineering Education*, Charleston, SC, April 1991.
- Nelson, J. K., Hirsch, T. J., and Fallon, D. J., "Feasibility of Air-Launched Free-Fall Boats for Use in Offshore Rescue," *Proceedings of the 1990 SAFE Association Convention*, San Antonio, December 1990.
- Hulse, D. A., and Nelson, J. K., "Fracture and Implant Biomechanics," *Proceedings of American College of Veterinary Surgeons*, 14th Veterinary Surgical Forum, Chicago, October, 1987.
- Hogan, H. A., Smith, W. K., Nelson, J. K., Hulse, D. A., and Auer, J. A., "Finite Element Model For Studying a Biodegradable Intramedullary Rod with Interlocking Pins," *Proceedings of Biomedical Engineering VI: Recent Developments*, Dallas, October, 1987.
- Hulse, D. A., and Nelson, J. K., "Biomechanics of Fractures," *Proceedings of American College of Veterinary Surgeons*, 2nd European Surgical Forum, Frankfurt, Germany, June, 1987.
- Hulse, D. A., and Nelson, J. K., "Biomechanical Basis for Selecting Implants," *Proceedings of American College of Veterinary Surgeons*, 2nd European Surgical Forum, Frankfurt, Germany, June, 1987.
- Hulse, D. A., Nelson, J. K., and Herron, M., "Stress Analysis of Fracture Surfaces," *Texas Veterinary Medical Journal*, Vol. 49, No. 1, pp. 25-28, 1987.
- Hulse, D. A., and Nelson, J. K., "Principles of Intramedullary Pinning for Fracture Stabilization," *Texas Veterinary Medical Journal*, Accepted for Publication, December, 1986.
- Hulse, D. A., Nelson, J. K., and Herron, M., "Cerclage, Hemicerclage, and Tension Band Application," *Texas Veterinary Medical Journal*, Accepted for Publication, December, 1986.
- Nelson, J. K., Beason, W. L., and Pond, A. D., "A Hybrid Structural Ice Defense Mechanism," *Proceedings of Civil Engineering in the Arctic Offshore*, ASCE, St. Louis, March, 1985.
- Nelson, J. K., "JANISE: An Interactive Structural Analysis Computer Program," *Proceedings of ASCE Seventh Conference on Electronic Computation*, St. Louis, August, 1979.

### **Significant Reports:**

- Nelson, James K., "Evaluation of Acceleration Forces in a Scale Model of the Verhoef FL75-NS-70 Freefall Lifeboat (Rev 2)," Prepared for Verhoef Aluminium Scheepsbouw Industries, Aalsmeer, Netherlands, University of Texas at Tyler College of Engineering Report No. CoE-2015-03 July 2015
- Nelson, J. K., "Full-Scale and Model Acceleration Force Evaluation with the Hatecke GFF-9.8c21T Model Free-Fall Lifeboat," Prepared for Hatecke, GmbH, Drochtersen, Germany, University of Texas at Tyler College of Engineering Report No. CoE-2015-01, May 2015.
- Nelson, James K., Crippen, Thomas, Grimes, Samantha, and Stone, Aaron, "Evaluation of the Efficacy on an Alternative Free-Fall Lifeboat Seat Testing Method," Prepared for Verhoef Aluminium Scheepsbouw Industries, Aalsmeer, Netherlands, University of Texas at Tyler College of Engineering Report No. CECS-2014-05 December 2014
- Nelson, James K., "Evaluation of Acceleration Forces in a Scale Model of the Verhoef FL75-NS Freefall Lifeboat," Prepared for Verhoef Aluminium Scheepsbouw Industries, Aalsmeer, Netherlands, University of Texas at Tyler College of Engineering and Computer Science Report No. CECS-2014-04 June 2014

- Nelson, J. K., Odell, M. R. L., and Kennedy, T. J., "Deformation and Acceleration Force Measurements with the Verhoef FL50-ULS-WC Free-Fall Lifeboat," Prepared for Verhoef Aluminium Scheepsbouw Industries, Aalsmeer, Netherlands, University of Texas at Tyler College of Engineering and Computer Science Report No. CECS-2013-05, November 2013.
- Nelson, J. K., "Acceleration Force Measurements with the Hatecke GFF-9.8c Model Free-Fall Lifeboat," Prepared for Hatecke, GmbH, Drochtersen, Germany, University of Texas at Tyler College of Engineering and Computer Science Report No. CECS-2013-04, October 2013.
- Nelson, J. K., "Acceleration Forces and Displacements in the Full-Scale Verhoef FL-75 Free-Fall Lifeboat For the Nexen Golden Eagle Project," Prepared for Verhoef Aluminium Scheepsbouw Industries, Aalsmeer, Netherlands, University of Texas at Tyler College of Engineering and Computer Science Report No. CECS-2012-04, December 2012.
- Nelson, J. K. and McGinnis, M. J., "Evaluation of the Verhoef FL-50 Free-Fall Lifeboat with Increased Occupant Weight," Prepared for Verhoef Aluminium Scheepsbouw Industries, Aalsmeer, Netherlands, University of Texas at Tyler College of Engineering and Computer Science Report No. CECS-2012-02, June 2012.
- Nelson, J. K., "Acceleration Force Measurements with the Hatecke GFF-8.1c24 Free-Fall Lifeboat," Prepared for Hatecke, GmbH, Drochtersen, Germany, University of Texas at Tyler College of Engineering and Computer Science Report No. CECS-2012-01, May 2012.
- Nelson, J. K., "Acceleration Force Measurements with the Hatecke GFF-5.8c21 Free-Fall Lifeboat Model For Use with a 7.575 m Ramp," Prepared for Hatecke, GmbH, Drochtersen, Germany, University of Texas at Tyler College of Engineering and Computer Science Report No. CECS-2011-08, December 2011.
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Nelson, James K., "A Case for Dual Level Accreditation," ASCE Civil Engineering Department Heads Annual Meeting, Colorado, May 2007.

Nelson, James K., "Are We Ready? A Vision for Development of a Coherent Plan for Large-Scale Emergency Response," CECS Chautauqua Seminar Series, October 2005.

Woo, Michael H., James K. Nelson, and Jeffery J. Scott, "Dissemination of Academic Resources Through the World Wide Web: Creating WEB Pages and Applets," A workshop presented at the 1997 Southeastern Section Conference of the American Society for Engineering Education, April 1997.

Nelson, James K., "Development and Utilization of the Free-Fall Lifeboat," Presented at the 1996 Engineers Week Banquet, Charleston, SC, February 1996.

Nelson, James K., "Evolution of the Free-Fall Lifeboat," Presented at The Citadel Department of Civil Engineering Spring Seminar Series, March 1995.

Nelson, James K., "Evolution of the Free-Fall Lifeboat," Presented to the Charleston Civil Engineers Club, January 1994.

Nelson, James K., and Nancy B. Regan, "Implementation of Free-Fall Lifeboats on United States Ships," Presented to the Society of Naval Architects, New York Metropolitan Section, May 1993.

Nelson, J. K., "Teaching Graduate Engineering via Television: An Educator's Perspective," presented in the panel discussion entitled "Efficacy of Live Television for Distance Education and Effective Resource Utilization" at the 1993 Southeast Region Conference of the American Society for Engineering Education, Nashville, Tennessee, April, 1993.

Nelson, J. K., and D. J. Fallon, "Free-Fall Lifeboats: Evaluation of Performance," Presented at the Mechanical Engineering Graduate Seminar Series, Old Dominion University, Norfolk, Virginia, March 1991.

### ***Honors and Awards***

University of Texas at Tyler College of Engineering Pillar of the College Award for meritorious service to the College for an extended period of time, November 2017.

Received State Flag of Texas for service leading the Texas Higher Education Coordinating Board Tuning Oversight Councils, 2014.

Brazzel Professor of Engineering, The University of Texas at Tyler, College of Engineering and Computer Science, 2005 to January 2016.

Chi Epsilon Chapter Honor Member, Awarded by the Clemson University Chapter of Chi Epsilon, November 2000

Award for Faculty Excellence, Awarded by the Clemson University Board of Trustees for exceptional achievement in teaching, research or advising that has earned official recognition from students, peers and colleagues, February 1997

1996 United States Marine Safety Award, Awarded annually by the United States Marine Safety Association for accomplishments furthering the cause of safety in the marine field, November 1996.

### ***Sponsored Research and Contracts:***

"Evaluation of Acceleration Forces in a Scale Model of the Verhoef FL75-NS-70 Freefall Lifeboat (Rev 2)," Verhoef Aluminium Scheepsbouw Industries, Aalsmeer, Netherlands, P.I. J. K. Nelson, July 2015, \$9,943.19

"Full-Scale and Model Acceleration Force Measurements with Hatecke GFF-9.8c21-T Free-Fall Lifeboat," Hatecke, GmbH, Drochtersen, Germany, P.I. J. K. Nelson, May 2015, \$10,914.61

"Engineering Summer Program: 2015," Texas Higher Education Coordinating Board, Austin, Texas, P.I. J. K. Nelson, Co-P.I. Tonna Brooks, May 2015, \$13,998.

"Evaluation of Acceleration Forces in a Scale Model of the Verhoef FL75-NS Freefall Lifeboat," Verhoef Aluminium Scheepsbouw Industries, Aalsmeer, Netherlands, P.I. J. K. Nelson, June 2014, \$9,472.

"Engineering Summer Program: 2014," Texas Higher Education Coordinating Board, Austin, Texas, P.I. J. K. Nelson, Co-P.I.'s Jennifer Scott and Kay Pleasant, April 2014, \$12,500.

"Full-Scale Evaluation of the Verhoef FL50-ULS-WC Free-Fall Lifeboat for IMO Compliance," Verhoef Aluminium Scheepsbouw Industries, Aalsmeer, Netherlands, P.I. J. K. Nelson, November 2013, \$8,800.

"Model Acceleration Force Measurements with Hatecke GFF-9.8c Free-Fall Lifeboat to Assess Design Changes," Hatecke, GmbH, Drochtersen, Germany, P.I. J. K. Nelson, October 2013, \$9,150.

"Scale Model Evaluation Evaluation of the Verhoef FL50NS Free-Fall Lifeboat," Verhoef Aluminium Scheepsbouw Industries, Aalsmeer, Netherlands, P.I. J. K. Nelson, July 2013, \$11,062.

"Acceleration Forces and Displacements in the Full-Scale Verhoef FL-75 Free-Fall Lifeboat For the Nexen Golden Eagle Project," Verhoef Aluminium Scheepsbouw Industries, Aalsmeer, Netherlands, P.I. J. K. Nelson, December 2012, \$9,745.44.

"Evaluation of the Verhoef FL-50 Free-Fall Lifeboat with Increased Occupant Weight," Verhoef Aluminium Scheepsbouw Industries, Aalsmeer, Netherlands, P.I. J. K. Nelson with McGinnis, M. J. June 2012, \$9,272.

"Acceleration Force Measurements with the Hatecke GFF-8.1c24 Free-Fall Lifeboat," Prepared for Hatecke, GmbH, Drochtersen, Germany, P.I. Nelson, J. K., May 2012, \$8,791.

"Full-Scale and Model Acceleration Force Measurements with Three Hatecke Free-Fall Lifeboat Models to Assess Design Changes," Hatecke, GmbH, Drochtersen, Germany, P.I. J. K. Nelson, December 2011, \$9,359.

"Analysis and Evaluation of the Verhoef FL-75 Free-Fall Lifeboat Model," Verhoef Aluminium Scheepsbouw Industries, B.V., Aalsmeer, Netherlands, P.I. J. K. Nelson with McCaslin, S., July 2010, \$68,323.

"Full-Scale and Model Acceleration Force Measurements with Hatecke GFF-8.1m Free-Fall Lifeboat," Hatecke, GmbH, Drochtersen, Germany, P.I. J. K. Nelson, April 2011, \$8,507.

"Full-Scale Acceleration Force Measurements with Hatecke GFF-6.6c21 Free-Fall Lifeboats," Hatecke, GmbH, Drochtersen, Germany, P.I. J. K. Nelson, December 2010, \$8,830.

Odell, M.R.L. (CO-PI); Nelson, J.K. (Co-PI), Trampus, K., (Co-I), Brown, F. (Co-I), Stocks, E. (Co-I), Geiger, W. (Co-I) and Bailey, B.. (Co-I), 2010-11, East Texas STEM Center, Texas STEM Initiative, Texas Education Agency, 2010, \$550,000.

"Acceleration Force Measurements with the Verhoef FL-75 Free-Fall Lifeboat Model," Verhoef Aluminium Scheepsbouw Industries, B.V., Aalsmeer, Netherlands, P.I. J. K. Nelson, July 2010, \$11,752.

"Full-Scale and Model Acceleration Force Measurements with Two New-Build Free-Fall Lifeboats," Hatecke, GmbH, Drochtersen, Germany, P.I. J. K. Nelson, April 2010, \$25,545.

Odell, Michael R.L. (PI), Nelson, J, and Trampus, K., East Texas STEM Center, Congressional Grant, 2010, \$300,000.

"Expanding the Engineering Pipeline," Texas Youth in Technology Grant Program, The Texas Workforce Commission, Austin, Texas, P.I. J.K. Nelson, January 2010, \$143,287.

"Full-Scale Acceleration Tests with Hatecke GFF-5.7 Free-Fall Lifeboat Aboard the M.V. Mohegan," Sealift, Inc. Oyster Bay, NY, P.I. J. K. Nelson, November 2009, \$9,884.

"Full-Scale Acceleration Tests with the Hatecke GFF-8.1m-20 Lifeboat Full-Scale and Model Tests," Hatecke, GmbH, Drochtersen, Germany, P.I. J. K. Nelson, April 2009, \$7,927.

"Full-Scale and Model Acceleration Force Measurements with the Jiangyin-Norsafe GES-25 Free-Fall Lifeboat," Jiangyin Norsafe F.R.P. Co. Ltd. Yuecheng Town, Jiangyin City, Jiangsu Province Peoples Republic of China, January 2009, \$12,927.

Nelson, J., Odell, M.R.L., Scott, J., and Pleasant, K. Engineering recruitment Program Summer Camps, \$20,000, 2008; \$8,000, 2009.

White, A., Nelson, J., Geiger, W., Sherman, C, Bailey, B, Gray, N. and Odell, M. UTEACH Pre-proposal, University of Texas System, 2008, \$41,000.

"Full-Scale Acceleration Tests with the Hatecke GFF-5.5c and GSL-6.6c Lifeboats and Model Tests with the GFF-7.4M and GFF-6.6MIII Lifeboats," Hatecke, GmbH, Drochtersen, Germany, P.I. J. K. Nelson, October 2008, \$8,102.

"Full-Scale Acceleration Tests with the NorSafe GES22 Free-Fall Lifeboat Aboard the M.V. TransPacific," TransAtlantic Lines, Inc., Greenwich, Connecticut, P.I. J. K. Nelson, April 2008, \$12,223.

"Full-Scale Acceleration Tests with the Hatecke GFF-5.5m17, GFF-5.5m20 and GFF-5.5m25 Free-Fall Lifeboats," Hatecke, GmbH, Drochtersen, Germany, P.I. J. K. Nelson, October 2007, \$7,754.

Odell, Michael R.L. (PI), Nelson, J, and Trampus, K., East Texas STEM Center, Congressional Grant, 2008, \$148,000.

Physical and Analytical Evaluation of the Verhoef FL-50 Free-Fall Lifeboat Shell Oil UK and the UK Offshore Operators Association through Verhoef Aluminium Scheepsbouw Industrie, P.I. J. K. Nelson, May 2007, \$94,670.

"Texas Science, Technology, Engineering, and Math (T-STEM) Centers–East Texas," Texas Education Agency, Co-O.I. with Michael Odell, May 2007, \$1,228,899.

"Scale Model Acceleration Tests with the Hatecke Free-Fall Lifeboats," Ernst Hatecke, GmbH, Drochtersen, Germany, P.I. J. K. Nelson, July 2007, \$7,984.

Odell, M.R.L. (Co-PI) ; Nelson, J.K. (Co-PI), Trampus, K., (Co-I), Brown, F. (Co-I), Stocks, E. (Co-I), Geiger, W. (Co-I) and White, A. (Co-I), 2007-10, East Texas STEM Center, Texas STEM Initiative, Texas Education Agency, \$3.25 million.

"Full-Scale Acceleration Tests with the Hatecke GFF-6.6M20 Free-Fall Lifeboat," Ernst Hatecke, GmbH, Drochtersen, Germany, P.I. J. K. Nelson, June 2006, \$7,284.

"Full-Scale Acceleration Tests and Evaluation with the the Fassmer 4.9, 6.6 and 8.3 Free-Fall Lifeboats," Fr. Fassmer Co., GmbH, Berne, Germany, P.I. J. K. Nelson, February 2006, \$20,429.

"Model and Full-Scale Acceleration Tests with the Hatecke GFF-5.7M, GFF-6.6MII and GFF-7.4MII Free-Fall Lifeboats," Ernst Hatecke, GmbH, Drochtersen, Germany, P.I. J. K. Nelson, October 2005, \$6,827.

"Full-Scale Acceleration Tests and Evaluation with the Beihai Onboard the MV *Baffin Strait*," TransAtlantic Lines, Greenwich, CT. Research conducted in Diego Garcia," P.I. J. K. Nelson, July 2005, \$8,033.

"Model and Full-Scale Acceleration Tests with the Hatecke GFF-8.1M and GFF-7.4MII Free-Fall Lifeboats," Ernst Hatecke, GmbH, Drochtersen, Germany, P.I. J. K. Nelson, May 2005, \$6,672.

"Evaluation of the Adequacy of Current IMO Design Criteria for Free-Fall Lifeboats," United States Coast Guard, Washington, D.C. P.I. J. K. Nelson, September 2004, \$9,999.

"Model and Full-Scale Prototype Acceleration Tests with the Hatecke GFF-6.6MII Free-Fall Lifeboat," Ernst Hatecke, GmbH, Drochtersen, Germany, P.I. J. K. Nelson, October 2004, \$4,725.

"Evaluation of Impact Forces During Ice-Landing with the SSI 50/54 Man Capsule," Survival Systems International, Valley Center, California, Germany, P.I. J. K. Nelson, October 2003, \$10,335.

"Model and Prototype Acceleration Tests with the Hatecke GFF-4.9M Free-Fall Lifeboat," Ernst Hatecke, GmbH, Drochtersen, Germany, P.I. J. K. Nelson, August 2002, \$7,036.

"Technical Development of a 75-Passenger Free-Fall Lifeboat with a 40-Meter Certification Height," Alexander/Ryan Marine and Safety Company with Ernst Hatecke GmbH of Germany and Beihai Qingdao Shipyard of China, P.I. J. K. Nelson with T. A. Reinhold, June 2001, \$73,608.

"Continued Technical Support for the Florida Coastal Monitoring Program," University of Florida, P.I. Timothy A. Reinhold with J. K. Nelson, May 2001, \$85,000.

"Development of Energy, Fire and Sound Conductivity Software," National Brick Research Center, P.I.'s J. K. Nelson and R. H. Brown, April 2001.

"Model Prototype Acceleration Tests with the Hatecke GFF-T-8.1M Free-Fall Lifeboat," Ernst Hatecke, GmbH, Drochtersen, Germany, P.I. J. K. Nelson, April 2001, \$6,304.

"Evaluation and Acceleration Tests of the Gepa GFFF-1 Free-Fall Lifeboat Onboard the M/T Montauk," Marine Design and Operations, Incorporated, Research conducted on Guam, PI: J. K. Nelson, February 2001, \$7,587.

"Lateral Impact Acceleration Measurement with the Hatecke GSL-T8.4 Lifeboat and GSL-5.7M Lifeboat," Ernst Hatecke, GmbH, Drochtersen, Germany, PI: J. K. Nelson, September 1999.

"Experimental Evaluation of Various YTONG VN and VU Series Roof Panels," YTONG Florida, Ltd., PI: J. K. Nelson with R. H. Brown, September 1998, \$14,403.

"Experimental Evaluation of Various YTONG VN6075-887a and VN5092-887 Roof Panels for Use at Polk Community College," Polk Community College, PI: J. K. Nelson with R. H. Brown, September 1998, \$12,777.

"Full-Scale and Model Testing of the Hatecke GFF-4.9 and GFF-6.6MII Free-Fall Lifeboats," Ernst Hatecke, GmbH, Drochtersen, Germany, PI: J. K. Nelson, August 1998, \$11,330.

"Full-Scale Lateral Impact Test with the Hatecke GSL-6.6 Lifeboat/Rescue Boat," Ernst Hatecke, GmbH, Drochtersen, Germany, PI: J. K. Nelson, November 1997, \$1,800.

"Full-Scale and Model Testing of the Hatecke GFF-6.5 Free-Fall Lifeboat," Ernst Hatecke, GmbH, Drochtersen, Germany, PI: J. K. Nelson, February 1997, \$6,940.

Microsoft Instructional Laboratory Grant, Microsoft Corporation, PI: J. K. Nelson with Steve R. Sanders, \$73,200, June 1996.

"Full-Scale Testing to Determine Compliance with Intended Strength Requirements for Free-Fall Lifeboats," United States Coast Guard, PI: J. K. Nelson, May 1996, \$9,991.

"Scale Model Testing to Evaluate Compliance with the Requirement for Free-Fall Lifeboats to be Capable of Successfully Launching in Adverse Weather Conditions," United States Coast Guard, PI: J. K. Nelson, May 1996, \$4,991.

"Full-Scale and Model Testing of the Hatecke GFF-5.7 Free-Fall Lifeboat," Ernst Hatecke, GmbH, Drochtersen, Germany, PI: J. K. Nelson, March 1996, \$6,663.

"Full-Scale and Model Testing of the Hatecke GFF-11.5 Free-Fall Lifeboat," Ernst Hatecke, GmbH, Drochtersen, Germany, PI: J. K. Nelson, June 1995, \$6,478.

"Full-Scale Acceleration Measurement during the Required IMO Prototype Tests with the Friolet Esparanto Capsule," Friolet Marine Services, Bas-Caraquet, New Brunswick, Canada, PI: J. K. Nelson, July, 1994, \$5,052.

"Full-Scale Acceleration Measurement during the Required IMO Impact Test with the CA-2100 Survival Capsule," Survival Systems International, Valley Center, California, PI: J. K. Nelson, July, 1994, \$5,413.26.

"Full-Scale and Model Testing of the Hatecke GFF-6.6M and GFF-7.4M Free-Fall Lifeboats," Ernst Hatecke, GmbH, Drochtersen, Germany, PI: J. K. Nelson, April 1994, \$12,779.

"Full-Scale and Prototype Model Tests of the Fassmer GAR-7.7 Series Free-Fall Lifeboat," Fr. Fassmer & Company, GmbH, Berne, Germany, PI: J. K. Nelson, April 1994, \$11,268.

"Experimental Measurement of Wind Force Coefficients on the Verhoef FL-30a Free-Fall Lifeboat," Verhoef Aluminium Scheepsbouw Industrie, Aalsmeer, The Netherlands, PI: J. K. Nelson with T. A. Reinhold, February 1994, \$6,946.

"Evaluate Ability of a 9.5 Meter Conventional Lifeboat to Survive and Offshore Explosion," Shat Watercraft, Limited, Gosport, England, PI: J. K. Nelson, December 1993, \$8,452.

"Evaluate Performance and Acceleration Forces on the Verhoef FL-30a Free-Fall Lifeboat," Verhoef Aluminium Scheepsbouw Industrie, Aalsmeer, Holland, PI: J. K. Nelson, November 1993, \$5,646.

"Evaluate Performance of the Harding FF-34 Free-Fall Lifeboat for Reflagging the Cape Wrath and Cape Washington," Bethlehem Steel BethShip, Sparrows Point, Maryland, for the United States Maritime Administration, PI: J. K. Nelson, October 1993, \$20,304.

"Full-Scale and Model Prototype Acceleration Tests of the Hatecke GFF-8.1M Free-Fall Lifeboat," Ernst Hatecke Jacht und Bootswerft, GmbH, Drochtersen, Germany, PI: J. K. Nelson, September 1993, \$6,333.

"Review of Current Free-Fall Lifeboat Literature and Recommendations for Needed Research," United Kingdom Health and Safety Executive, London, England, PI: J. K. Nelson, August 1993, \$8,471.

"Evaluation of Acceleration Forces During Prototype Trials With the Watercraft WFF-8.6 Free-Fall Lifeboat," Watercraft International, Limited, Gosport, England, PI: J. K. Nelson, June 1993, \$19,500.

"Estimate Performance and Develop Testing Protocol for a New Build 400 Passenger Conventional Lifeboat," World City Corporation, New York, New York, PI: J. K. Nelson, April, 1993, \$48,759.

"Review of Watercraft WFF-10.15 Free-Fall Lifeboat for Use in Training Programs at RGIT," Robert Gordon Institute of Technology, Survival Center, Aberdeen, Scotland, PI: J. K. Nelson, May 1993, \$9,950.

"Evaluation of Acceleration Forces at the Helmsman Seat in the WFF-10.15 Free-Fall Lifeboat," Watercraft International, Limited, Gosport, England, PI: J. K. Nelson, November 1992, \$15,800.

"Evaluating the Launch Performance and Behavior of the WFF-10.15 Free-Fall Lifeboat," Watercraft International, Limited, Gosport, England, PI: J. K. Nelson, February 1991, \$31,500.

"Verhoef FL-25 Free-Fall Lifeboat Prototype Acceleration Tests," Verhoef Aluminium Scheepsbouw Industrie, Aalsmeer, Holland, PI: J. K. Nelson, August 1991, \$2,400.

"Hatecke GFF-5.7 & 7.4 Free-Fall Lifeboat Prototype and Model Tests," Ernst Hatecke, GmbH, Drochtersen, Germany, PI: J. K. Nelson, June 1991, \$3,800.

"Verhoef FL-50 Free-Fall Lifeboat Prototype Tests," Verhoef Aluminium Scheepsbouw Industrie, Aalsmeer, Holland, PI: J. K. Nelson, May 1991, \$3,300.

"Model Testing of the FL-50 and Full-Scale Testing of the FL-30 Free-Fall Lifeboats," Verhoef Aluminium Scheepsbouw Industrie, PI: J. K. Nelson, March 1990, \$3,500.

"Strain Gage Installation and Testing for the USS Daniel Webster (SSBN 626)," Charleston Naval Shipyard, PI: J. K. Nelson, August 1990, \$4,500.

"Development of Air Launched Free-Fall Boats," United States Navy, PI: J. K. Nelson, Co-PI: T. J. Hirsch (Texas A&M University), Total Project Budget \$656,189, (Phase 1a funded 18 August 1989, \$77,000; Phase 1b to have been funded 19 January 1990, \$125,000, but the project was canceled because of budget cutbacks; Clemson would have received \$76,800 for Phase 1).

"An Investigation Into the Feasibility of Using Free-Fall Lifeboats on Fixed Production Platforms," Exxon Production Research Company, PI: J. K. Nelson, September 1989, \$5,000.

"Full-Scale Testing of Damaged Tubular Platform Components," Joint oil industry project conducted with PMB Systems Engineering, PI: J. K. Nelson, Co-PI: L. D. Lutes, November 1988, \$200,000 (TAMU Share was \$95,000).

"Development of an Orthopedic Load Cell," TEES Veterinary Initiative Funds, Co-PI's: D. A. Hulse, T. A. VanGundy, J. K. Nelson, and T. L. Kohutek, December 1987, \$2,500.

"Development of a Free-Fall Lifeboat," A Joint Industry Project, PI: J. K. Nelson, Co-PI: T. J. Hirsch, September 1987, \$32,000.

"Pelvic Fracture Biomechanics," STAR Fund, College of Veterinary Medicine, PI: T. G. VanGundy, Co-PI: D. A. Hulse with J. K. Nelson, April 1987, \$2,950.

"Evaluation of Pressures and Design of Stiffener for Rear Canopy of a Free-Fall Lifeboat," Sonat Offshore Drilling, Incorporated, PI: J. K. Nelson, April 1986, \$6,500.

"Acceleration Measurement and Evaluation in Free-Fall Lifeboats," Sonat Offshore Drilling, Incorporated, PI: T. J. Hirsch, Co-PI: J. K. Nelson, October 1985, \$35,000.

"System Consequence Factors for Offshore Oil Production Platforms," Center for Energy and Mineral Resources, PI: J. K. Nelson, September 1985, \$7,000.

"Structural Review of George R. Brown Convention Center," Bernard Johnson, Incorporated, PI: J. K. Nelson, September, 1984, \$26,800.

"Finite Element and Experimental Analysis of Three Complex Tubular Joints," Bernard Johnson, Incorporated, PI: E. L. Marquis, Co-PI: J. K. Nelson, May 1984, \$82,000.

***Doctoral Graduate Student Advising: (Texas A&M University)***

Nathan Kathir, Ph.D., "Determination of System Consequence Factors for Jacket-Type Offshore Platform Structures," Graduated December 1991.

***Masters Graduate Student Advising (University of Texas at Tyler):***

Sreelatha Aihloor Subramanyam, MS "VELVET: Virtual Electronics Laboratory for Visualized Education and Training," Chair, Dr. David Beams, Co-Chair

Gordon Venable, MS "Structural Analysis of the Verhoef FL-50 Free-Fall Lifeboat during Launch," Graduated December 2007.

***Masters Graduate Student Advising (Clemson University):***

Julie A. Babb, MS "Development of a Free-Fall Lifeboat with a 40-meter Certification Height," Graduated August 2002.

Suzanne Aultman, MS (Non-Thesis), Graduated August 2002.

David Pelfrey, MS (Non-Thesis) Graduated May 2001.

Jennifer Harter, MS (Non-Thesis) Graduated May 2001.

Michael Hamilton, MS (Non-Thesis) Graduated May 2001.

Christopher Farmer, MS (Non-Thesis) Graduated May 2001.

Daniel Bernd, MS (Non-Thesis) Graduated August 2000.

Martin Okorie, MS (Non-Thesis) Graduated December 1998.

Elizabeth Crosby Judson, MENGGR "Pump Station Design for a Waste Treatment Facility," Graduated December 1997.

John Pike Judson, MENGGR "Repair of Construction Defects in Concrete Cooling Tower Basins," Graduated December 1997.

Kevin Blayton, MSCE (non-thesis)," Graduated December 1997.

Michael Stuart White, MENGGR "Development of a Computer Program for the Design of Reinforced Concrete Cantilever Retaining Walls with Level or Sloped Backfill," Graduated August 1996.

Gregory W. Canniff, MENGGR, "A Study of Composite Action in Continuous Plate Girder Steel Bridge Deflection," Graduated August 1996.

Benjamin Douglas Lollar, MENGGR, "Correlation of Compressive and Tensile Strengths for Concrete Used in Highway Pavements," Graduated August 1996.

Wallace A. Jack, MENGGR, "Expansion of 2-Dimensional Free-Fall Model to Include Wind Effects," Graduated August 1995.

John M. Hann, MENGGR, "Cost Analysis of Design Alternatives for an Ocean Fishing Pier," Graduated August 1995.

Glenn Stewart, MENGGR, "Failure Analysis in Purlins of Prefabricated Metal Buildings," Graduated August 1994.

Richard R. Schimizza, "Experimental Rubberized Concrete as a Light Duty Paving Material," Graduated August 1994.

Alan J. Schweickhardt, MENG, "Evaluate Performance of a Newbuild 400 Passenger Lifeboat," Graduated May 1994.

Gregory James Jones, MENG, "EPSDAD--Electronic Pavement Smoothness Data Acquisition Device," Graduated December 1992.

Timothy W. Jessup, MENG, "Experimental and Finite Element Analysis for Reshaping a Segment of a Submarine Hull," Graduated May 1992.

Henry N. Shephard, MENG, "A Computer Cost Model for Budget Estimating," Graduated August 1990.

***Masters Graduate Student Advising (Texas A&M University):***

Byron Weaver, M.E., "Comparison of WSD and LRFD Design Procedures and Results for Commercial Construction," Graduated December 1989.

J'Nina Womble, M.S., "Role of Redundancy in Jacket-Type Offshore Platforms," Graduated December 1988

Bryan Green, M.S., "Development of a Load Cell for Stress Analysis of a Canine Tibia," Graduated December 1988

John Doyle, M.E., "Variation of Component Stresses With Advancing Wave Position in Jacket-Type Platforms," Graduated May 1988

Larry Fragomeli, M.S., "Improved Design Procedure for Embedded Plates in Gravity Anchors on Precast Concrete Panels," Graduated December 1987.

Andres Urdaneta, M.E., "Development of Closed-Form Solution for Multi-Segment Catenary Moorings," Graduated August 1986.

Kelley Adamson, M.E., "Finite Element Analysis of a Tubular Joint," Graduated August 1985.

Alan Pond, M.E., "Finite Element Analysis of a Tubular Joint," Graduated December 1984.

***Courses Taught: (The University of Texas at Tyler)***

CENG 2253, Civil Engineering Measurements, Spring 2006

CENG 2331, Introduction to Civil Engineering Computing, Fall 2005

CENG 2336, Geomatics, Fall 2005

CENG 4109, Senior Seminar, Fall 2013, 2014.

CENG 5326, Dynamic Analysis of Structures, Spring 2006

MENG 4399, Undergraduate Research: Lifeboat Seat Testing, Fall 2014

MENG 4399, Undergraduate Research: Lifeboat Fall Forces, Spring 2014

***Courses Taught: (Western Michigan University)***

CCE 455 Design of Steel Structures II, Spring 2005

CCE 231, Introduction to Civil and Construction Engineering, Fall 2004

CCE 253, Civil Engineering Measurement, Spring 2004, Spring 2005

CCE 386, Structural Analysis, Spring 2003

CCE 440, Introduction to Structural Design, Fall 2003

***Courses Taught: (Clemson University)***

CE 251, Analysis Techniques in Civil Engineering, Fall 1998.

CE 253, Civil Engineering Measurements, Fall 1999, 2000, 2001.

CE 603, Use of Computers in Structural Analysis and Design, Summer 1991, 1994, 1996



CE 653, Structural Analysis II, Fall 1989, 1990, 1994  
CE 691, Development of Software Tools for Civil Engineers, Summer 1997  
CE 801, Matrix Methods of Structural Analysis, Spring 1990, Fall 1991, Fall 1993, Fall 1995, Spring 1998  
CE 802, Advanced Reinforced Concrete Design, Spring 1994, Fall 1996  
CE 803, Advanced Structural Steel Design, Summer 1995  
CE 805, Structural Mechanics, Spring 1996, Fall 1997, Fall 2000  
CE 806, Dynamic Analysis of Structures, Fall 1992, Spring 1995, Spring 1997, Spring 2000, Fall 2001  
CE 807, Numerical and Approximate Methods in Structures, Spring 1991, Summer 1993  
CE 808, Finite Element Method in Engineering, Spring 1993  
CE 893, Experimental Stress Analysis, Spring 1993  
CE 893, Design of Offshore Structures, Spring 1992  
EM 625, Advanced Strength of Materials, Summer 1990, 1992

***Courses Taught: (Texas A&M University)***

CVEN 211, Statics and Dynamics  
CVEN 205, Engineering Mechanics of Materials  
CVEN 344, Reinforced Concrete Structures  
CVEN 345, Theory of Structures  
CVEN 346, Structural Steel Design  
CVEN 482, Mechanics of Materials  
CVEN 487, Design of Timber Structures  
CVEN 686, Offshore and Coastal Structures

***University and Public Service:***

***Continuing Engineering Education***

Title: Earthquake Engineering (CEE#2361-013)  
Responsibility: Prepared and presented section on structural dynamics  
Date: 2-4 November 1993  
Participants: 15

***Departmental Committee Service (Clemson University)***

Member, Graduate Studies and Thrust Area Subteam of the Strategic Planning Process, 1994  
Ad Hoc Member, Graduate Admissions Committee, 1989-1998

***College Committee Service (Western Michigan University)***

Member, College of Engineering and Applied Science Graduate Programs and Research Council, 2003-2005

***College Committee Service (Clemson University)***

Member, College of Engineering and Science Computer Committee, 1997-1998  
Member, Search committee for the department chair of the Industrial Engineering Department, 2000-2002.

***University Committee Service (Western Michigan University)***

Member, New Faculty Orientation Committee, Co-coordinator of component on faculty evaluation and mentoring. 2003.

***University Committee Service (The University of Texas at Tyler)***

Member, Provost Search Committee, 2014-2015.  
Member, Intellectual Property Committee, 2014-Present.

Chair, Dean of Business and Technology Search Committee, 2013-2014.

Chair, Dean of Pharmacy Search Committee, Summer 2013.

Chair, Dean of Education and Psychology Search Committee, Spring 2013.

Member, University of Texas System Engineering Task Force to promote engineering education and research within Texas, 2012-2013.

Chair, Executive Vice President for Business Affairs Search Committee, Spring 2011.

Chair, Dean of Arts and Science Search Committee, Fall 2010-Spring 2011.

Chair, International Travel Oversight Committee, 2010-2015.

Member, Alcohol, Tobacco and Drug Committee, Fall 2009-2011

Chair, Dean of Business and Technology Search Committee, Fall 2008-Spring 2009.

Member, QEP Steering Committee for SACS Reaffirmation, Spring 2008-Fall 2009.

Chair, Dean of Arts and Science Search Committee, Fall 2007-Spring 2008.

***Professional and Public Service***

Chair of the Academic Advisory Committee for the Texas Board of Professional Engineers, 2012 to Present.

Chair of the Task Committee on Faculty Licensure for the Texas Board of Professional Engineers, 2012 to 2014.

Serve as a member of the Chancellor's 2012 Education Symposium, Houston Community College system, 2012.

Serve as a member of the external advisory committee for the West Houston Center at Houston Community College, 2008 to Present.

Served as a member of the external advisory committee for the University of Dayton Department of Civil and Environmental Engineering and Engineering Mechanics, 2006 to 2009.

Served as a member of the external advisory committee for the College of Engineering and Computing at Florida Gulf Coast University, 2006 to 2010.

Served as a member of the engineering panel for the 113 Calhoun Street Historic Structural Retrofit project for South Carolina Sea Grant.

Serve as a member of the South Carolina Department of Education Committee to prepare technical specifications for the purchase of new school busses for the state, 2000.

Member of The Independent Task Committee for the Evaluation of the Mark Clark/James Island Expressway Construction, 1989-1991 (Note: This effort included attendance at meetings to interview those involved in the design and construction of the expressway and those individuals making allegations about improper construction practices, review of engineering drawings and reports, field inspection of the construction sites, witnessing some field strength tests, and evaluating test results. This committee was appointed by the General Services Division of the State Budget and Control Board and includes members from the University of South Carolina and The Citadel.)

***International Service:***

I have been asked by the United States Coast Guard to serve as a member of the United States Delegation and to present the position of the United States in the development of criteria for free-fall lifeboats at the Lifesaving, Search, and Rescue Subcommittee, and now the Ship Design and Equipment Subcommittee, of the International Maritime Organization. The meetings of the subcommittee are held annually in London. The International Maritime Organization, of which the United States is a member, is an international treaty organization for marine safety under the United Nations. I began serving in this capacity in 1988. Many of the recommendations for the design and testing of free-fall lifeboats that have evolved from research I directed and participated in have been incorporated into United States position papers that have formed the basis for much of the current criteria to certify free-fall lifeboats.

***Other Service:***

Faculty Advisor to the J. T. L. McNew Student Chapter of ASCE at Texas A&M, 1987-1988

Instructor for Texas Aeronautics Commission Flight Instructor Recertification Seminar, 1988-1989

Member of the review panel for the Thomas C. Evans Paper Competition for Southeast Section of ASEE, 1992

Judge for ASCE Student Chapter Carolinas Conference Design Competition, 1992

Served as faculty advisor for the civil engineering student organization at The University of Texas at Tyler, 2005-2006

Served Ballet Tyler in the design and construction of sets for the ballet *Coppelia* (2006) and *Cinderella* (2007)

Served the School of Ballet Tyler in the design and construction of sets and for the staging of the school recitals, 2006, 2007

Faculty Advisor to the Student Chapter of ASCE at UT Tyler, 2015-Present

19 June 2018