

FRANZ N. RAD, PHD, PE, SE, FASCE, FACI

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SUMMARY OF EXPERIENCE

Academic

Assistant Professor, 1971-1975; Associate Professor, 1975-1980; Professor, 1980-present
Department Chair, 1979-2002; Arthur M. James Professor of Structural Engineering, 2004-Present

Research

- Teaching, laboratory research, and consulting in graduate school, Austin, Texas, 1968-71
- Principal Investigator, NSF sponsored Soil Mechanics Lab development, 1973-75
- Principal Investigator, NSF sponsored research, Behavior of Unbraced Reinforced Concrete Frames under Lateral Loads, 1975-1977
- Co-principal Investigator, U.S. Dept of Interior sponsored research, Ground Fault Current Propagation in Soils, 1977-1978
- Principal Investigator, PCI sponsored research, Shear Capacity of Machine-Cast Prestressed Concrete Slabs, 1988 – 1989
- Principal Investigator, Metro/DOGAMI sponsored research, Earthquake Damage Assessment of Urban Areas, 1993 – 2001
- Principal Investigator, Oregon Masonry Institute sponsored research, Strength of Grouted Anchors in Masonry Walls, 1997-99
- Principal Investigator, Contech sponsored research, Behavior of Hollow Clay Tile Walls Retrofitted with Fiber Reinforced Polymer (FRP) Composites, 1997-98
- Principal Investigator, Oregon State Univ sponsored research, Wind and Seismic Tiedowns on Manufactured Housing, 1998
- Principal Investigator, Morse Bros. sponsored research, Grouted Conduit Connections under Cyclic Axial Loading, 1999
- Co-principal Investigator, NSF sponsored research, RescueNet: Embedded Sensors to Rescue Survivors, 2003-2008
- Principal Investigator/Research Fellow, PCI sponsored research, Development of Reinforcement in Grouted Conduit Connections, 2006-2008
- Principal Investigator, Reiersgaard sponsored research, Behavior of Cardboard Pallets under Compression and Flexural Loading, 2009

Specialization

Reinforced Concrete Design, Prestressed Concrete Design, Timber Design, Forensic Engineering, Retrofitting Existing Structures, Experimental Investigation

Consulting

Project Engineer, Mackenzie Engineering, Inc., Portland, summers 1972-84; technical consultant to various engineering firms and government agencies, including: City of Portland, Bureau of Buildings, C. G. Peterson, Consulting Engineers, Moffit, Nichol, and Bonney, US Geological Survey, R. Brown Consulting Group, Construction Research, Inc. Investigated several structural failures and non-performance issues, mostly related to concrete materials and reinforced concrete structures.

Professional Registration

State of Oregon, Structural Engineering 1975, Civil Engineering 1976

Publications

Over 75 technical publications in engineering Journals, conference proceedings, and reports.

Sample publications:

- Rad, F.N., James, A.M., “Learning from the Past Experiences of Practicing Engineers” Proceedings of ASCE 4th Forensic Congress, Cleveland, OH, Oct 5-9, 2006, pp. 12-16.
- Rad, F.N., James, A.M., “Forensic Engineering in Structural Engineering Curriculum,” Third International Structural Engineering and Construction Conference, Shunan, Japan, Sep 20-23, 2005.
- Rad, F.N. and Imper, R.R., “An Experimental Study on the Strength of Grouted Conduit Connections under Cyclic Axial Loading,” Proceedings of the First International Structural Engineering and Construction Conference, Honolulu, January 24-27, 2001, pp. 789-792.
- Hasenberg, C., and Rad, F.N., “Lessons Learned in a Level-Two Analysis for Buildings and Lifelines in the Portland, Oregon, Metropolitan Region,” Proceedings of the Fifth U.S. Conference on Lifeline Earthquake Engineering, Seattle, August 12-14, 1999.
- McCormack, T. C., and Rad, F.N., “Fragility Curves for Estimating Earthquake Losses Based on Rapid Visual Screening of Buildings,” Proceedings of the Annual Conference of the Canadian Society for Civil Engineering, Regina, Saskatchewan, June 1999.
- Rad, F.N., “Strength of Grouted Anchors in Masonry Walls,” Proceedings of the 8th North American Masonry Conference, CD ROM, The Masonry Society, Austin, TX, June 1999.
- Hasenberg, C., and Rad, F.N. “Creating Soil Hazard Input Maps for the Portland Metropolitan Region,” paper presented at the Association of Engineering Geologists Symposium, Seattle, WA, June 1998.
- Rad, F.N., “Teaching Theory Through Physical Testing,” Proceedings of the 12th World Conference on Engineering Mechanics, CD ROM, ASCE, La Jolla, CA, May 1998.
- McCormack, T., and Rad, F.N., “An Earthquake Loss Estimation Methodology for Buildings Based on ATC-13 and ATC-21,” The Professional Journal of the Earthquake Engineering Institute, EERI, November 1997, pp. 605-621.

Education

- B.S., Civil Engineering, University of Texas at Austin, 1968
- M.S., Civil Engineering, University of Texas at Austin, 1969
- Ph.D., Civil Engineering, University of Texas at Austin, 1973

Scientific and Professional Societies

National Society of Professional Engineers (NSPE), American Society for Engineering Education (ASEE), American Society of Civil Engineers (ASCE), American Concrete Institute (ACI), Prestressed Concrete Institute (PCI), Post-Tensioning Institute, Structural Engineers Association of Oregon (SEAO), Professional Engineers of Oregon (PEO), Tau Beta Pi, Chi Epsilon, Phi Kappa Phi, Sigma Xi.

Professional Activities

Technical Committee Appointments:

- ASCE-ACI Committee on Inelastic Behavior of Reinforced Concrete Structures, 1977-1982
- ASCE-ACI Committee on Columns, 1985-present
- ASCE - 1997 Structures Congress Steering Committee, 1995-1997
- Steering Committee, EERI Regional Conference, Portland, OR, 1994-95
- Chair, Structural Engineers Association of Oregon Seismic Committee, 1997-00

Professional Offices Held by Elections:

- Department Heads Council Executive Committee, ASCE, 1996-1999, 1999-2003

- Editor, Dept Heads Council Executive Committee, ASCE, 1997-2002
- Member, Board of Directors, ACI-Oregon Chapter, 1984-1989
- Vice President, ACI-Oregon Chapter, 1984-1987
- President, ACI-Oregon Chapter, 1987-1989
- Member, Board of Directors, SEAO, 1982-1987
- President, SEAO, 1985-1986

Publication Reviewer/Referee for:

Harper and Row, ASCE Structural Division, ACI Journal, ASEE Engineering Education, EERI

Honors and Awards:

- Full Academic Scholarship, Southwestern University, 1962-1964
- Dean's Fellowship, University of Texas, 1968-1969
- Winner of "ASEE Western Electric Fund Award for Excellence in Teaching", 1979
- Listed in Who's Who in the West, 1980-1981
- Fellow, American Society of Civil Engineers, 1989
- Fellow, American Concrete Institute, 1991
- Recipient, "Excellence in Concrete Award", ACI Oregon Chapter, 1992
- Recipient, Centennial Certificate, American Society for Engineering Education, 1993
- Recipient, "The Engineer of the Year Award", American Society of Civil Engrs, Oregon Section, 2002
- Recipient of Endowed Professorship "The Arthur M. James Professor of Structural Engineering", Maseeh College of Engineering and Computer Science, Portland State University, 2003
- Life Member, Structural Engineers Association of Oregon, 2006