

Allen L. Jones, PhD, PE

Associate Professor

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EDUCATION

UNIVERSITY OF WASHINGTON, Seattle, Washington

PhD in Civil Engineering, 2003
Major: Geotechnical Engineering
Minor: Probability and Statistics
Dissertation: Evaluation of Liquefaction Potential

UNIVERSITY OF IDAHO, Moscow, Idaho

Master of Science in Geological Engineering, Geotechnical Option, 1987
Minor: Geostatistics
Thesis: Spatial and Temporal Analysis for Idaho Earthquake Hazard Assessment

UNIVERSITY OF IDAHO, Moscow, Idaho

Bachelor of Science in Geological Engineering, Geotechnical Option, 1986

PROFESSIONAL HISTORY

SOUTH DAKOTA STATE UNIVERSITY, Brookings, South Dakota

Associate Professor, 2006 to Present

Responsible for developing/teaching undergraduate/graduate geotechnical engineering courses. Conducting research in general area of geotechnical/geological/geoenvironmental engineering with specific research in the areas of probabilistic seismic hazard assessments, liquefaction induced ground damage, paleoliquefaction, probability and spatial statistics, bridge scour, abandoned mine lands (AML) reclamation, AML data integration, mine subsidence, and animal waste containment. Served on multiple departmental, college and university committees.

SOUTH DAKOTA STATE UNIVERSITY, Brookings, South Dakota

Assistant Professor, 2003 to 2006

Responsibilities consistent with those of Associate Professor position listed above.

JONES EARTH TECHNOLOGIES, LLC, Brookings, South Dakota

Senior Engineer, 2003 to present (mainly summers)

Serves as a senior engineer for expert witness, training, programming, and design engineering on various projects in Washington, Colorado, California, and South Dakota.

UNIVERSITY OF WASHINGTON, Seattle, Washington

Pre-Doctoral Associate, 2000 to 2002

Responsible for developing and teaching graduate coursework in lateral earth pressures and earth retaining system design. Developed lecture plans, homework assignments, and exams.

UNIVERSITY OF WASHINGTON, Seattle, Washington

Graduate Research Assistant, 9/1999 to 3/2003

Pursued graduate studies in geotechnical engineering and probability and statistics. Research focused on three projects and the dissertation. The projects included a probabilistic approach to estimating ground motion parameters from liquefaction features, spatial uncertainty in geotechnical soil properties, and uncertainty analysis for a seismic warning system of a major bridge structure. The dissertation focused on development of a new and improved procedure for evaluation of liquefaction potential. A minor study focused on probability and statistics.

HART CROWSER, INC., Seattle, Washington

Senior Engineer and Project Manager, 1987 to 2003

Served as a senior engineer for an earth and environmental technologies consulting firm. Responsibilities included business development through frequent client interaction, proposal writing and project procurement, project tracking and management, review and performing technical analyses, and report writing related to geotechnical and environmental projects. Technical expertise includes offshore and near-shore construction, deep excavations, high-rise buildings, bridges, roadways, landfills, landslide stabilization, slope and embankment design, engineering for pavement and roads, piers, probabilistic seismic hazard studies/seismic design, abandoned mine land remediation, and foundation design for a wide range of industrial, commercial, and infrastructure projects. Other responsibilities included personnel training, implementation, and management of a company wide CADD system; introduction and guidance of a corporate wide Total Quality Management program; and the technology committee.

UNIVERSITY OF IDAHO, Moscow, Idaho

Instructor, 1987 to 1988

Taught undergraduate courses for the College of Engineering.

UNIVERSITY OF IDAHO, Moscow, Idaho

Graduate Research and Teaching Assistant, 1986 to 1988

Research Assistant for thesis (geostatistical approach to an earthquake hazard study of Idaho) and Teaching Assistant for mechanics of materials course.

GEO-HYDRO ENGINEERS, Atlanta, Georgia

Staff Engineer, 1987

Staff Engineer for geotechnical and civil engineering consulting firm. Responsibilities include field observation of fill placement, footing observation, concrete sampling, basic surveying, etc. and laboratory testing of soils, concrete, and asphalt.

AWARDS AND HONORS

ADSC Industry Advancement Award

Tau Beta Pi

Phi Eta Sigma

PROFESSIONAL LICENSES AND CERTIFICATIONS

Registered Professional Civil Engineer, State of Washington (1991), State of California (1996), State of South Dakota (2003)

Registered Professional Geotechnical Engineer, State of California (1998)

Registered Professional Engineering Geologist, State of Washington (2001)

Registered Professional Geologist, State of Washington (2001)

Health and Safety at Hazardous Waste Sites Certification, Satisfies requirements set forth in 29 CFR Part 1910.120 (1991)

AHERA Asbestos Abatement Project Designer Certification, Satisfies requirements of 40 CFR Part 763 (1996)

Radiation and Safety and Use of Nuclear Soil Gauges Certification, CPN Corporation, 1989

Concrete Technician Certification, Concrete Advisory Board of Georgia, 1987

PROFESSIONAL AFFILIATIONS

Pacific Earthquake Engineering Research Center
Earthquake Engineering Research Institute
The Geo-Institute
American Society of Civil Engineers
Society of American Military Engineers
Association of Engineering Geologists
The International Association of Foundation Drilling
American Society of Engineering Educators
American Society of Testing Materials

COURSES TAUGHT

South Dakota State University

Undergraduate

CEE 346 – Geotechnical Engineering (Fa03, Sp04, Fa04, Sp05, Fa05, Sp06, Fa06, Sp07)

CEE 346L – Geotechnical Engineering Lab (Fa03, Sp04, Fa04, Sp05, Fa05, Sp06, Fa06, Sp07)

CEE 447 – Foundation Engineering (Fa03, Fa05)

CEE 447L – Foundation Engineering Lab (Fa03, Fa05)

CEE 447 – Advanced Geotechnical Engineering (Sp04, Sp06)

CEE 464 – Capstone Design I (Fa05, Sp06, Fa06, Sp07)

CEE 465 – Capstone Design II (Fa05, Sp06, Fa06, Sp07)

Graduate

CEE 547 – Foundation Engineering (Fa03, Fa05)
 CEE 547L – Foundation Engineering Lab (Fa03, Fa05)
 CEE 547 – Advanced Geotechnical Engineering (Sp04, Sp06)
 CEE 632 – Advanced Foundation Engineering (Fa04, Fa06)
 CEE 639 – Advanced Geotechnical Laboratory Testing (Sp05, Sp07)

University of WashingtonGraduate

CEE 524 – Lateral Earth Pressures and Earth Retaining Systems Design (Sp00, Sp01, Sp02)

University of IdahoUndergraduate

ENGR 101 – Engineering Graphics (Fa87, Sp88)
 ENGR 201 – AutoCAD Drafting and Design (Sp88)
 ENGR 350 – Mechanics of Materials Recitation (Fa87)

PUBLICATIONS

Jones, A.L., and Uckert, R.S. (2006). "The investigation of the use of coal mine refuse for subbase materials and embankment fill in South Dakota." *Proceedings of the 2006 Billings Land Reclamation Symposium and American Society of Mining and Reclamation*, Billings, MT, June 5 - 8, 2006.

Jones, A. L., Arduino, P., Kramer, S. L., Eberhard, M. O. (2002) "Uncertainty analysis for a seismic warning system" Transportation Research Record No. 1808, Soil Mechanics 2002. Washington, D.C.

Kramer, S.L. and Jones, A.J. (2000). "Implications of Great Cascadia Subduction Zone Earthquakes for Liquefaction and Landslides," *Proceedings, Penrose Conference* (invited paper), Seaside, Oregon, June.

Jones, A. L., Bailey, M. J. (2000) "Case Study: Prediction of coal mine subsidence below clubhouse," in Proceedings of the Fourth North American Rock Mechanics Symposium, Seattle, Washington, July 31 – August 3, pp. 449-455.

Miller, S. M., Jones, A. L. (1988) "Probabilistic estimation of earthquake ground shaking intensities in Idaho and Western Montana," in Proceedings of the 24th Symposium on Engineering Geology and Soil Mechanics, Coeur d'Alene, Idaho, February 29 – March 2, pp. 375-389.

ACADEMIC REPORTS

Jones, A., Kramer, S., Arduino, P. (2001) "Spatial Uncertainty of Geotechnical Soil Properties", Pacific Earthquake Engineering Research (PEER) Center, University of California, Berkeley.

Kramer, S., Arduino, P., Eberhard, M. Jones, A., (2001) "Seismic Instrumentation System for Warning and Rapid Recovery", Washington State Department of Transportation.

PROFESSIONAL REPORTS

Authored over 250 technical reports for engineering projects while employed as a design engineer. Authored and was in responsible charge for over 40 plan and specification sets. The relevance of this work is the applied experience that is brought to the classroom (teaching), being aware of opportunities and trends in industry (advising) and technical areas of industry that need investigation (research). Examples of reports, and plans and specifications include:

1. Engineering Report, Storm Water Management Plan for Birmingham Steel Corporation, West Seattle Facility, Seattle, Washington, 1994, 300 pp. (est.)
2. Design Analysis, Replace Berm Liners, Fleet and Industrial Supply Center, Manchester, Washington, 1996, 100 pp. (est.)
3. Geotechnical and Environmental Study, Navy Community Support Complex, Naval Station Everett, Everett, Washington, 1992, 200 pp. (est.)
4. Perkins County Reclamation Plans and Specification, United States Department of Interior, Office of Surface Mining, 2005, Six plan sheets and 100 pages of specifications.
5. Safeco Insurance World Data Center Plans and Specifications, Safeco Insurance Company, Six plan sheets and 75 pages of specifications (est.).

INVITED PRESENTATIONS

"The Investigation of the Use of Coal Mine Refuse for Subbase Materials and Embankment Fill in South Dakota." This paper was presented at the 2006 Billings Land Reclamation Symposium sponsored by the American Society of Mining and Reclamation, Billings, MT (2006).

"Shoring and Pile Foundation Construction and Design Considerations in Urban Corridors." This paper was presented at the bi-annual Geotechnical Seminar held by the American Society of Civil Engineers and South Dakota State University, Sioux Falls, South Dakota (2004).

"Uncertainty Analysis for a Seismic Warning System." This paper was presented at the Annual Transportation Research Board Annual Conference in Washington, D.C. on a probabilistic warning system for the Alaskan Way Viaduct in Seattle, Washington (2002).

"Abandoned Mine Information (AMI) and Mapping." This paper was presented at the Annual Conference of the National Association of AML Programs held in Steamboat Springs, Colorado on an information system that was developed to track and analyze AML hazards in the State of Washington (2000).

“Case Study: Prediction of Coal Mine Subsidence below Clubhouse.” This paper was presented at The Fourth North American Rock Mechanics Symposium in Seattle, Washington and discussed several analytical methods that were developed to predict mining subsidence using a field case study (2000).

“Shoring and Dewatering Design and Performance, King Street Center, Seattle.” This paper was presented at Spring Seminar, Excavation Support and Dewatering, American Society of Civil Engineers and University of Washington in Seattle, Washington and discussed the unique aspects of a case study in soft soil conditions (1999).

“Base Isolation of the Washington State Emergency Operations Center.” This paper was presented to the Structural Engineers Association of Washington in Bellevue, Washington. This was a presentation on the structural and geotechnical aspects of seismic base isolation of structures in Washington State (1998).

“Probabilistic Estimation of Earthquake Ground Shaking Intensities in Idaho and Western Montana.” This paper was presented at the 24th Symposium on Engineering Geology and Soil Mechanics in Coeur d’Alene, Idaho (1988).

SHORT COURSES, WORKSHOPS, and OTHER EDUCATIONAL PROGRAMS

Geotechnical Conference. (2006) South Dakota State University and the Mountain Plains Consortium. Sioux Falls, South Dakota.

Billings Land Reclamation Symposium. (2006) American Society of Mining and Reclamation. Billings, Montana.

The Governor's Restoration Forum. (2006) Economic and Public Benefits of Restoring Western Landscapes. Billings, Montana

54th Annual Geotechnical Engineering Conference. (2006) Department of Civil Engineering, University of Minnesota, Minnesota Geotechnical Society, and the Geo-Institute of ASCE. St. Paul, Minnesota.

Structural Seminar. (2005) American Society of Civil Engineers and South Dakota State University. Sioux Falls, South Dakota.

Legal Issues for South Dakota Professional Engineers. (2005) Continuing Education Short Course, Half Moon Seminar, LLC, Sioux Falls, South Dakota

Countermeasure Design for Bridge Scour and Stream Instability. (2005). National Highway Institute and Federal Highway Administration. NHI Course 135048. Fort Pierre, South Dakota.

Geotechnical Seminar. (2004) American Society of Civil Engineers and South Dakota State University. Sioux Falls, South Dakota.

Recent Advances in Geotechnical Earthquake Engineering. (2002) American Society of Civil Engineers and the University of Washington, Seattle, Washington.

National Association of AML Programs Annual Conference. (2000) Steamboat Springs, Colorado.

Geotechnical Field Instrumentation. (2000) American Society of Civil Engineers and the University of Washington, Seattle, Washington.

EERI Annual Conference. (2000) St. Louis, Missouri.

Excavation Support and Dewatering. (1999) American Society of Civil Engineers and the University of Washington, Seattle, Washington.

Specialty Conference on Geotechnical Earthquake Engineering and Soil Dynamics. (1998) University of Washington, Seattle, Washington.

Landslides in the Puget Sound Region. (1998) American Society of Civil Engineers and the University of Washington, Seattle, Washington.

Seismic Short Course on Evaluation and Mitigation of Earthquake Induced Liquefaction Hazards. (1997) San Francisco State University, San Francisco, California.

Seminar on New Developments in Earthquake Ground Motion Estimation and Implications for Engineering Design Practice. (1994) Applied Technology Council, Redwood City, California.

Total Value Management Principles Course. (1993) The Institute for Quality Service, John Inman and Associates, Portland, Oregon.

Value Improvement Projects Course. (1993) The Institute for Quality Service, John Inman and Associates, Portland, Oregon.

RCRA Compliance Training Course. (1993) Hart Crowser, Inc., Seattle, Washington.

Ground Modification Applications in Geotechnical and Geoenvironmental Engineering Course. (1993) American Society of Civil Engineers and the University of Washington, Seattle, Washington.

Preliminary Environmental Assessments Course. (1992) Hart Crowser, Inc., Seattle, Washington.

Seismic Design of Structures: Dynamic Analysis and Lateral Load Determination Course. (1992) University of Washington, Seattle, Washington.

Soil Nailing and Reinforced Walls Seminar. (1992) University of Washington, Seattle, Washington.

Project Management Course. (1992) Clive Shearer, PE, CMC, Seattle, Washington.

Communication, Persuasive Negotiation, and Handling Difficult Situations Short Courses. (1992) D'Angelo & Associates, Seattle, Washington.

Second International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics. (1991) University of Missouri, St. Louis, Missouri.

Client Oriented Writing Short Course. (1991) Gardner David Seminars, Seattle, Washington.

Geotechnical Aspects of Earthquake Engineering Seminar. (1990) University of Washington, Seattle, Washington.

Design for Piles and Pile Groups - Current Engineering Short Course. (1990) University of British Columbia, Vancouver, B.C., Canada.

GRADUATE STUDENT SUPERVISION

<u>Student</u>	<u>Role</u>	<u>Oral Exam Date</u>
Brandon C. Harland	Thesis Committee	November, 2003
Ryan Sylvester	Thesis Committee	November, 2004
Andrew Johnson	Design Paper Advisor	April, 2005
Richard Uckert	Thesis Advisor	April, 2005
Ahmed Al-Omari	Thesis Committee	April, 2005
Yushen Wu	Ph.D. Committee	November, 2005
Michael McCarty	Design Paper Advisor	August, 2006
Dayasagar Thudukurthy	Thesis Committee	October, 2006
Dane Jorgensen	Thesis Advisor	May, 2007
Joe Chilson	Design Paper Advisor	May, 2007
Jared Haskins	Design Paper Advisor	May, 2007

CURRENT RESEARCH GRANTS

Evaluation of Scour Rate In Cohesive Soils (SRICOS) Method on South Dakota Cohesive Soils, Francis Ting and Allen Jones, South Dakota Department of Transportation and the Mountain Plains Consortium, January 2007 – December 2008.

PREVIOUS RESEARCH GRANTS

Use of Mine Tailings from Abandoned Mine Lands in South Dakota for the Construction of Highway Embankments, Allen Jones, Experimental Program to Stimulate Competitive Research (EPSCOR) in South Dakota, September 2004 – May 2005.

Laboratory Equipment Upgrades for Geotechnical Laboratory Testing, Allen Jones, New Ideas Grants from SDSU, September 2003 – May 2004.

Alternative Closure Design and Construction Methods for Abandoned Mine Lands, May 1996 – December 1998, Allen Jones and Jeff Wagner, United States Department of the Interior, Bureau of Mines.