



RESUME

ZOHRAB A. SAMANI, Ph.D., P.E.

FORMAN Professor

Box 30001, Dept. 3CE
New Mexico State University
Las Cruces, NM 88003
USA

Tel: 575-646-2904/575-621-0100
Fax: 575-646-6049
zsamani@nmsu.edu
zohrabsamani@gmail.com
<http://cagesun.nmsu.edu/~zsamani>

Registered Professional Civil Engineer: State of Utah, State of New Mexico

Areas of Expertise:

Remote Sensing and hydrological modeling

Water Resources Development

Agricultural Water Management

Water Conservation and planning

Groundwater Hydrology & Groundwater Modeling

International Technology Transfer

Renewable Energy/Biomass-bio-energy

AWARDS:

Outstanding Performance Award for Research and Teaching, Utah State University, 1987.

Distinguished Educator Award. PNM Foundation, New Mexico, 1989.

Border Lecturer Award. Fulbright Foundation, 1997.

Faculty Service Award. New Mexico State University, 1997.

Globalization Award, Center for International Programs, New Mexico State University, 2000.

Bromilow Outstanding Research Award. College of Engineering. New Mexico State University. Feb. 2003.

NMSU Research Council Award for exceptional achievement in creative research and scholarly activities. New Mexico State University, 2004.

Best poster award. AGEP National Conference, NMSU, Las cruces, 2004.

Best paper award. GRAS symposium, NMSU, 2005

FORMAN Professorship Award, 2009

USDA Research Excellence Award, 2008 (This was a group award given to RGBI Project Team).

ASCE National Hydraulic Ram competition award, (third place), March 2010. URA Project with Luis Viareal.

Patents:

1. Energy production from organic waste (utility patent received, 2009)
2. Producing Liquid Organic Fertilizer from organic substrate (utility patent received 2010)
3. Ultimeater , flow measuring device in pipes (Provisional patent received, utility patent pending)



Current Employment

8/87-present: Professor, Department of Civil, Agricultural and Geological Engineering, New Mexico State University, Las Cruces, New Mexico. Tenured faculty member in Agricultural Engineering and Water Resources. Teaching includes graduate and undergraduate courses in irrigation and drainage, hydraulics, hydrology, soil and water conservation, hydraulic structures, groundwater modeling and design of wells and Pumps. Research includes groundwater modeling, wellhead protection, bio-remediation of contaminated groundwater, Energy production from organic waste, organic liquid fertilizer, soil venting, crops consumptive use, remediation of hazardous waste sites by heap leaching, reuse of industrial and agricultural wastewater and open channel hydraulics. Service includes university and professional society committee work, technical review for federal agencies including National Science Foundation, U.S. Department of Education, U.S. Department of Energy, USDA, United States Army, and U.S. Corp of Engineering ,U.S. Bureau of Reclamation, and various private foundations, technical assistance to local and state organizations, international technology transfer and advising graduate and undergraduate students.

Education:

Tehran University. B.S. Ag. Engr./Water Resources. Tehran University 1974. Received a five-year scholarship from Isfahan University of Technology upon completion of the B.S. degree.

Utah State University. M.S. Agricultural and Irrigation Engineering, 1979. Thesis: Soil hydraulic stability in subsurface drainage systems.

Utah State University. Ph.D., Agricultural and Irrigation Engineering, 1983. Dissertation: Numerical modeling of water movement through vadose zone under intermittent water application.

Previous Work History:

1984-1987 Research Assistant Professor, Utah State University (international Irrigation Center). Responsible for International Technology Transfer and Research on Water Management.

1983-1984. Research Associate, University of Arizona, Tucson, Arizona. Taught water management courses at the University of Arizona and worked on a research project developing water-yield interaction functions for Guayule plant for rubber production .

1/1/80-1/8/83. Graduate Research Assistant. Department of Agricultural Engineering, Utah State

University, Logan, Utah. Worked on field investigation and computer modeling of Surge Flow Irrigation.

1/1/80-1/8/83. Research Engineer. International Irrigation Center. Responsible for International Technology Transfer and Research on Water Management.

1/8/75-1/8/77: Ministry of Agriculture. Officer in charge of land reform and conflict resolution.

Teaching:

Academic Courses Taught:

Soil-Water-Plant Relationship (undergraduate course). Department of Soil, Water and Engineering, University of Arizona, Tucson, AZ., 1983.

Design of Wells and Pumps (graduate course). Agricultural Engineering Department, Utah State University, 1986-1987.

Geohydrology, GEN 452, CAGE Department, NMSU, 1987-1992

Hydraulic Structures, CE 482, CAGE Department, NMSU, 1987-1989

Groundwater Hydrology, CE 581, CAGE Department, NMSU, 1987-1990.

Open Channel Hydraulics, CE 531, CAGE Department, NMSU, 1990-1994

Irrigation Water Management , AEN 479, CAGE Department, NMSU, 1987-2000.

Irrigation and Drainage Systems Design, AEN 478, CAGE Department, NMSU, 1987-1998.

Soil and Water Conservation, AEN 475, CAGE Department, NMSU, 1987 through 2010,

Conservation Engineering, AEN 476, CAGE Department, NMSU, 1987-1991

Design Application, AEN 440, CAGE Department, NMSU, 1987-1990.

Design of Wells and Pumps, AEN 459, CAGE Department, NMSU, 1990-2010.

Hydraulic Systems Design, CE 382, CAGE Department, NMSU, 1990-2006.

Hydraulic Engineering, CE 331, CAGE Department, NMSU, 1992.

Surface Water Hydrology, CE 483, NMSU., 2000-2010

Design and Management of Irrigation Systems, Graduate Course taught at the University of Sonora, Mexico, during sabbatical leave, 1998-1999.

Short Courses Organized and Taught:

Design of Irrigation and Drainage Systems. El Salvador, C.A., 1986.

Design of Irrigation and Drainage Systems. El Salvador, C.A., 1987.

Small Scale Irrigation Systems Design and Operation, NMSU, 1988.

Computer Application in Irrigation and Drainage, NMSU, 1988.

Small Scale Irrigation Systems Design and Operation, NMSU, 1989.

Computer Application in Irrigation and Drainage, NMSU, 1989.

Crop Production Functions, 1989, Utah State University, Logan, Utah.

Irrigation Water Management, Piaui, Brazil, 1989.

Peru Agricultural Training Project, NMSU, 1990.

Computer Application in Water Management, Cairo, Egypt, 1990.

Small Scale Irrigation Systems Design and Operation, NMSU, 1990.

Computer Application in Irrigation and Drainage, NMSU, 1990.

Small Scale Irrigation Systems Design and Operation, NMSU, 1991

Computer Application in Irrigation and Drainage, NMSU, 1991

Agricultural and Municipal Waste Management, NMSU, 1991.

Small Scale Irrigation Systems Design and Management, NMSU, 1992.

Computer Application in Irrigation and Drainage, NMSU, 1992.

Design of Wells and Pumps, NMSU, 1992.

Small Scale Irrigation Systems Design and Management, NMSU, 1993.

Irrigation Study Tour for Water Managers from Honduras, NMSU, 1993.

Computer Application in Irrigation and Drainage, NMSU, 1993.

Soil Vapor Extraction, University of New Mexico, Feb 1993.

Soil Vapor Extraction, University of New Mexico, Sept., 1993.

Soil Vapor Extraction, University of New Mexico, 1994

Irrigation Systems Design, 1997, Hermosillo, Mexico. Sponsored by IMTA.

Water Management and Irrigation Scheduling, 1999, El Salvador, C.A.

Estimating Crops Water Requirements in New Mexico. Workshop organized and taught For personnel from New Mexico Office of State Engineer. March 2006.

Water conservation in Agriculture. Workshop organized for faculty from Various Afghanistan Universities, Kabul, Afghanistan, summer 2010.

Wells, Pumps etc.. Seminar organized for the New Mexico Farmers, Feb. 2012

Workshops Organized and Taught:

Water Measurement in Open Channels, 1995. El Paso, Texas.

Groundwater Management Workshop, NMSU, 1996.

Estimating Crop Evapotranspiration, for OSE, NMSU, 2006

Evaluating Crop Water Use in New Mexico. Office of the State Engineer. July 14-15,2007.

Wells, Pumps etc.. Workshop organized for the farmers. NMSU, Feb 11, 2012

Remote Sensing Training workshop. Office of State Engineer. Feb 15-20., 2012

Conference Organized:

National Water Conservation Conference, NMSU, 1996, 1997, 1998, 1999, 2000

International Projects:

Groundwater Resources Assessment for El Salvador. 1985 Developed groundwater maps and evaluated the potential for groundwater development in El Salvador, Sponsored by US AID.

Design of Irrigation and Drainage Systems. Training courses conducted at San Salvador, El Salvador, for the employees of the government and private sectors in charge of water management and agricultural development. The courses included classroom lectures as well as field experiments and evaluations. The courses were sponsored by the Agency for International Development (AID), 1986 and 1987.

Irrigation Water Management. A Two-week training course conducted at Piaui, Brazil, for the employees of various government organizations in charge of agricultural development and water management in north-east Brazil. The course was requested and sponsored by EMBRAPA (which is a Brazilian government organization similar to USDA), 1989.

Egypt Computer Training Course. This five months training course was conducted in Cairo, Egypt, for the employees of the water management institute. The course involved the application of computer in design and management of hydraulic systems. The course was sponsored by AID, 1990.

Reuse of Wastewater for Irrigation. This long-term pilot-scale study was designed to demonstrate the use of municipal wastewater for irrigation of Eucalyptus as an alternative for traditionally expensive wastewater treatment plants. The project was located at the border community of Ojinaga, Mexico and was sponsored by U.S. EPA, 1996-1999.

Evaluation of Groundwater Resources for the City of Juarez, Mexico. The project included the evaluation of groundwater resources and their geo-hydrological characteristics which could potentially provide future water needs for the City of Juarez. The project was sponsored by Ford Foundation, Fulbright Foundation and Junta Municipal del Agua of City of Juarez, 1997-1998.

Paraguay Irrigation Project. The project included assessing economical and technical feasibility of a large-scale irrigation project at the vicinity of recently constructed Yacyreta hydroelectric dam. The project was sponsored by government of Paraguay, 1998. Sponsored by government of Paraguay

Mexico Groundwater Project: Evaluation of groundwater resources, development potentials, groundwater recharge and management alternatives for the State of Sonora, Mexico, Sponsored by Anderson Consulting and Government of Mexico, 1998-2000

Tajikstan Project Developed Hydrological and Water Resources Assessment of the country of Tajikstan for post-Soviet agricultural development project, sponsored by US AID, 2002.

Uzbekistan Project. Developed irrigation, drainage and canal distribution plan for Post-Soviet agricultural development in Uzbekistan. Sponsored by United States Agency for International Development (US AID), 2005.

Tajikstan Project. Water resources and Irrigation infrastructure development in Tajikstan, sponsored by US AID, 2006.

Elephant Butte Irrigation District Project, New Mexico, United States. The project involved using remote sensing to assess district level agricultural water use and optimize reservoir management in New Mexico. 2008-2010. Sponsored by US Bureau of Reclamation.

Water Management Project, Sonora, Mexico. The project included groundwater resources evaluation and irrigation technology transfer to producers. I worked on this collaborative project at the invitation of a group of investigators at the University of Sonora, Mexico, during my sabbatical (1998-1999).

North American Alliance for Sustainable Water Resource Management. (2000-2005). This 5 year project was funded by U.S. Department of Education, Government of Canada and Mexico. The purpose of the project was to provide opportunity for scientific exchange between faculty and students within six universities which included; New Mexico State University, Michigan Technological University, University of British Columbia (Canada), Laval University (Canada), University of Veracruz (Mexico) and University of Sonora (Mexico).

Uzbekistan Municipal Water Project (Summer 2002). The project involved development of a plan to rehabilitate the municipal water distribution system for the City of Karchi in Uzbekistan. The project was sponsored by U.S. AID through Winrock International.

Assessing Potential for Renewable Energy in Mexico (2005-2006). The project evaluated the technical and economical feasibilities of producing energy and soil amendment from waste generated by dairy industry in Mexico. Funded by CONAHEC, Mexico.

Afghanistan Water & Agricultural Technology Transfer (AWATT) (2009-2010). Worked on training and supervised \$1.2 million reconstruction projects in various provinces in Afghanistan. Sponsored by USAID.

University Research Projects (NMSU):

PI, Water Measurement Project (1989-present). Developed low-cost flow measurement devices (Circular Flume, Trapezoidal Flume, S-M Flume, Mask Flume) for open channels and pumps. These devices are currently being used nationally and internationally. Sponsored by Agency for International Development (AID) and Elephant Butte Irrigation District (EBID).

PI, Development of a Real Time Irrigation Scheduling Model (1989-1990). Developed a real time irrigation scheduling demonstration unit where crops water requirement is calculated on a daily basis and used to schedule irrigation. The irrigation scheduling is implemented using a control module which operates electronic valves at the field turnouts. Funded by public utilities of New Mexico.

PI, Irrigation Systems Evaluation (1990-1991). Evaluated the efficiency of irrigation and pumping systems in southern New Mexico. This was a collaborative project with the faculty from La Molina University (Peru). Funded by the government of Peru.

Co-PI, Energy Conservation Demonstration (1992-1993). Investigated the economic impact of real time irrigation scheduling on the use of water and energy in New Mexico. Funded by New Mexico Energy and Mineral Department.

Co-PI, Effect of Oscillatory Flow in Soil Venting (1992-1994). Investigated the feasibility of using oscillatory pumping in soil venting for remediation of hydrocarbon contaminated soils. Funded by Los Alamos National Laboratory.

PI, Remediation of hazardous waste sites by heap leaching (1991-1995). Investigated the technical and economical feasibility of remediation of soils contaminated with chromium and lead using heap leaching technology. This was a collaborative project with scientists from Los Alamos National Laboratory. The project was funded by DOE/WERC.

PI, Remediation of Contaminated Surface and Groundwater with Organic Filters (1993-1994). Investigated the use of natural organic filters such as wheat and barley straw in removing heavy metals such as lead and copper from contaminated water. The project was funded by National Academy of Science.

PI, Development of a Wellhead Protection Plan for the City of Las Cruces (1993-1995). Developed a wellhead protection plan and defined the capture zones for the City of Las Cruces wells in the Mesilla Valley, using a combination of MODFLO groundwater model and PATH3D solute transport model. Funded by City of Las Cruces.

PI, Development of a Wellhead Protection Plan for the Aquifer of East Mesa (Las Cruces), (1995-1996). Developed a wellhead protection plan for the City wells located on the aquifer of East Mesa. Funded by City of Las Cruces.

PI, Faculty Directed Research for Undergraduate Minority Students (1992-1996). Directed research projects for twelve undergraduate minority students. The purpose of the program was to mentor undergraduate students and cultivate their interest toward graduate school. Five of the students mentored under this program, went to graduate school. The projects included remediation of hazardous waste sites by heap leaching, de-nitrification of nitrate-contaminated groundwater, and open channel hydraulics. The projects were funded by Coalition to Increase Minority Degrees (CIMD)/NSF.

PI, Bio-remediation of Groundwater Contaminated with Dairy Waste (1995-1998).

Investigated the use of organic substances such as acetate and glucose, for in-situ remediation of groundwater contaminated with Nitrate as a result of dairy operation in southern New Mexico. Funded by U.S. Department of Agriculture and WERC.

Co-PI, Effect of Lead Speciation on Soil Remediation (1995-1996). Used batch and column studies to investigate the effect of lead speciation on the remediation of lead contaminated soils. Developed a computer model to simulate the remediation process and to optimize the design parameters for maximum remediation efficiency. Funded by DOE/WERC.

PI, Flow Measurement in Open Drains (1995-1996). Developed a special flume for discharge measurement in open drains. The flume has the advantage of low cost and ease of transportation compared to traditional flumes. Funded by AMP.

Co-PI, Pesticide Vulnerability Assessment (1994-1997). Investigated the impact of pesticides application on the groundwater of southern New Mexico. Developed sensitivity maps to rank the level of vulnerability as a function of hydro-geological parameters. WRRRI Report #305. Funded by U.S. EPA and NM Department of Agriculture.

Co-PI, Bernalillo County Groundwater Assessment Project (1995-1998). Investigated the impact of septic tanks on the quality of the groundwater in Bernalillo County. Funded by the City of Albuquerque.

Co-PI, Transboundary Aquifers of El Paso/Ciudad Juarez/Las Cruces Region (1995-1998). Investigated and documented the extent, quality, quantity and other hydro-geological properties of the groundwater resources along the U.S.-Mexico Border (bi-national publication). Sponsored by U.S. EPA, Texas Water Development Board and International Boundary and Water Commission.

PI, Energy Recovery from Solid Waste (1995-1999). \$250,000. Investigated the use of municipal solid waste for energy production using a bi-phasic approach. Funded by NEDO, Japan, WERC and Enviroenergetic Inc.

Co-PI, Re-use of Wastewater to Promote Dry-land Agriculture (1998-1999). \$75,000. Investigated the use of municipal wastewater in promoting dry-land agriculture.

PI, Energy Production from Segregated Municipal Solid Waste (1999-2000) \$150,000. Investigated the potential for energy production from segregated waste for the City of Albuquerque (NM). The project introduced the concept of cellulase enhanced bio-degradation of municipal organic waste. Funded by DOE/WERC and City of Albuquerque.

PI, Energy Production from Feedlot Manure Waste (2000-2003). \$75,000. Investigated the technical and Economical Feasibility of Producing Energy and soil amendment from Feedlot Manure Waste. Funded by U.S. Department of Agriculture.

PI, Producing Energy from combined Animal Waste and Cotton Ginning Waste (2001-2002). \$50,000. Investigated the technical and economical feasibility of producing energy from Cotton Gin Waste by using the Cellulase bacteria in Manure Waste. Funded by U.S. Department of Agriculture/IFAFAFS program.

PI, Producing Liquid Organic Fertilizer from Landscape Grass Trimming (2001-2003) \$65,000. This on-going project investigates an innovative idea of producing organic liquid fertilizer from Green agricultural waste. Funded by WERC and NM Chile Commision.

PI, Ophir Creek Water Assessment, 2001-2002, \$10,000. Investigate the annual fluctuation and stream loss of the flow in Ophir Creek (Utah). Funded by U.S. Army.

Co-PI, Developing Tools to Optimize Beneficial Use of Water in Rio Grande Basin (2002-2005) \$360,000. Investigating the alternative management techniques to optimize water use by farmers and municipal user in Rio-Grande Basin. Funded by U.S. Department of Agriculture .

P.I. North American Alliance for Sustainable Water Management (2000-2005) \$750,000, Funded by U.S. Department of Education. This is a student and faculty exchange program between six universities in three countries of U.S., Canada and Mexico. The project provided financial support for collaborative research and education between the six universities. Funded by U.S. Department of Education, governments of Mexico and Canada.

Co-PI, Construction and Operation of a Field-Scale An-aerobic Digestion for Organic Waste in New Mexico (\$750,000, 2004-2007). Funded by the Association of State Energy Research and Technology Transfer Institutions, and the U.S. Department of Energy.

Co-PI, Field Demonstration of Two-Phase Anaerobic Digestion. Funded by NM Energy and Mineral, Through WERC. (\$150,000, 2008-2009)

Co-PI with Rhonda Skaggs. Developing Tools to Optimize Beneficial Use of Water Through Remote sensing. RGBI/USDA through college of Ag. (2005-2010), \$650,000.

Co-Pi, with Rhonda Skaggs-Improving Agricultural Water Conservation and Economic Returns in a Rapidly Growing, Peri-Urban, Multi-Cultural, Traditional Farming Community (\$350,000, 2009-2012).

P.I. Developing Infrastructure and estimating ET through remote sensing (\$620,000, 2005-2007). Sponsored by NSF.

P.I. Mapping Riparian ET using satellite imagery (2005-2007). Funded by NM USDA, \$50,000.

P.I. Water Conservation In Mesilla Valley through Remote Sensing. (2006-2007), \$262,000.
Funded by New Mexico Office of State Engineer.

P.I. Developing Practical Technologies to Estimate Pecan Water Use (\$46,000, 2005-2007).
Funded by USDA/ARS. Through College of Ag.

P.I. Developing Practical Technologies to Estimate Pecan Water Use (\$25,000, 2007-2008).
Funded by USDA/ARS Through College of Ag.

Experience With Minority Students:

Samani has been project director for 34 faculty directed research projects for undergraduate minority students. He has been research advisor for 18 minority graduate students.

Service and Professional Activities:

Chairman of CAGE Department T&P Committee (2001-present)

Chairman of CAGE Graduate Committee, 1990-2000

American Society of Agricultural Engineers (ASAE), New Mexico Chapter, Treasurer, 1993,
State President 1994.

Faculty Advisor, American Society of Agricultural Engineers, Student Chapter, 1996-1998.

Committee member, On-Farm Irrigation Committee, ASCE, 1990-1999

Committee Member, U.S. Committee on Irrigation and Drainage, 1990-1999

Committee member, North-Central Accreditation Committee for NMSU, 1997-1998

Technical Reviewer, ASCE, Journal of Irrigation and Drainage, 1987-1999

Technical Reviewer, ASAE, Journal of American Society of Agricultural Engineers, 1988-1999

Technical Reviewer, Journal of Geological Science, 1995-1997.

Technical Reviewer, National Science Foundation, 1993-1998

Technical Reviewer, Department of Education, 1991-1998

Technical Reviewer, Department of Energy, 1995-1996.

Technical Reviewer, Coalition to Increase Minority Degree (CIMD), 1995-1996.

Technical Reviewer, Charles Lindberg Foundation, 1992-1995

Technical Reviewer, Association for Environmental Health of Soil, 1997-1998

Member, New Mexico Visiting Scientist Program, 1996-1999.

Member, NMSU Latin American Core Faculty Committee, 1997-1999.

Member, NMSU Globalization Leadership Team. Appointed by NMSU president, 2003-present.

LEADERSHIP ACTIVITIES

1975-1977. Director, office of land reform and conflict resolution. Ministry of agriculture, Tehran, Iran.

1993-1996. Chairman, Civil Engineering Graduate Program Committee. New Mexico State University, Las Cruces, NM.

2000-2004. Chairman, Civil engineering tenure and promotion committee. New Mexico State University, Las Cruces, NM.

1999-2004. Campus director of North American Alliance for Water Conservation Project. New Mexico State University. Las Cruces, NM.

2003-2004. Member, NMSU internationalization leadership task force.

(2004) Team Leader (P.I). EPSCOR Hydrology Project. Submitted to NSF.

2010-2011. Member. College of Engineering Tenure & promotion committee

2009-2012. Chairman, Civil engineering tenure and promotion committee. New Mexico State University, Las Cruces, NM.

Computer Skills:

Programming languages: Fortran, Basic, MATLAB

Industrial Programs: AutoCAD, MODFLOW, MT3D, PATH3D, BIOPLUME, KYPIPE
MATLAB, WATERCAD, STORMCAD.

Consulting Experience:

Consulting Engineer, 1986, UINTEX Engineering Service, Salt Lake City, Utah. Water resources assessment of the country of El Salvador.

Consulting Engineer, 1989-1992. Levin-Fricke Environmental Consulting, San Francisco, California. Contracted to develop a Three-dimensional Soil Venting Model.

Consulting Engineer, 1989, Utah State University. Dry-land Agriculture and Crop Production Modeling.

Consulting Engineer, 1992, CORTEZIII, New Mexico. Evaluation of soil venting as technique for removal of contaminated vadose zone in White Sands Missile Range.

Consulting Engineer, 1991-1992, Mesquite Dairy Association, NM. Evaluation of impact of dairy operation on groundwater quality.

Consulting Engineer, 1991-1993. Moongate Water Co., NM, Served as expert witness for the lawsuit against the New Mexico Environmental Department.

Consulting Engineer 1993-1995, Soma Environmental Engineering, San Francisco, CA, Modeling the gas emission from a petroleum contaminated Site.

Consulting Engineer, 1993-2010, Las Uvas Dairy, Deming, NM, Groundwater Impact Assessment from Dairy Operation ,Design of waste pond Lagoons and land application of wastewater.

Consulting Engineer, 1993, Highland Residential Development Association. Evaluation of peak flow storm runoff as a result of residential development.

Consulting Engineer, 1994, Jurado Industry, Las Cruces, NM. Design of tanks, pumps and Hydraulic System for Pepper Mash food processing plant.

Consulting Engineer, 1995, MEVATEC, Las Cruces, NM. Groundwater quality assessment at the Picacho Hill Subdivision.

Consulting Engineer, 1995, Border Food, Deming, NM. Design of a wastewater reuse system and evaluation of its impact on groundwater quality.

Consulting Engineer, 1996-2010.. Jurado Industry, Las Cruces, NM. Design of pumps and hydraulic systems for Pepper Mash processing plant.

Consulting Engineer, 1996. Phelps Dodge Mining Co., Morenci, AZ. Testing and maintenance of pumps and wells in Morenci.

Consulting Engineer, 1996, Assessing the soil characteristics for construction of a recreation pond in CJC Ranches, NM.

Consulting Engineer, 1997, City of El Paso, Texas. Water Resources Development. Technical Assistant.

Consulting Engineer, 1998. Fast Ditch Co., Water Loss evaluation for Acequias in Northern New Mexico.

Consulting Engineer, 1998. Design of well and hydraulic network for Picacho Hill sub-division.

Consulting Engineer, 1998, Las Uvas Dairy, Deming, NM. Evaluating seepage loss from dairy waste ponds.

Consulting Engineer, 1999-2000. LDS Church & Anderson Insurance Co., Groundwater Resources Assessment in Costa de Hermosillio , Mexico.

Consulting Engineer, 2000. Winrock International and Mercy Corp International. Developed a manual for Organizing Water Users Association and Improving Water Management in Tajikstan.

Consulting Engineer, 2002. Winrock International/USAID. Worked as consultant for developing a municipal water distribution system for the City of Karchi, Uzbekistan.

Consulting Engineer, 2002. La Union Soil and Water Conservation District, NM. Assisted in technology application in Irrigation Water Management.

Consulting Engineer, 2003. Gunaji and Associates. Particle tracking modeling and contaminant transport assessment of the Picacho Hill Groundwater.

Consulting Engineer, 2006. Winrock International/USAID. Developed Water Sharing schemes and flow control structures for farmers in Central Asia.

Consulting Engineer, 2007-present. Expert witness. NM office of Attorney General, water adjudication program.

Consulting Engineer. Las Uvas Dairy 2008-2010. Waste lagoon testing and certification.

Expert witness, Stroud Law Firm. Water adjudication law suits, 2008-present

Expert witness, Sheehan-Sheehan and Associates, water adjudication, 2008-present.

Consulting Engineer. 2008. Turney Consulting. Water use assessment of turf grass in New Mexico.

Consulting Engineer, 2008-2010. Elephant Butte Irrigation District. Design of micro-hydroelectric systems for energy production from irrigation canals.

Expert Witness. Zuni Tribe water Adjudication, Office of State Engineer. 2009-present.

Consulting Engineer. Lower Rio-Grande Water Right Adjudication, Office of State Engineer. 2010-2011.

Consulting Engineer 2010-2012. Elephant Butte Irrigation District. Remote sensing analysis of water use, crop coefficient, and irrigation efficiency in the Lower Rio Grande Valley.

PAPERS AND PUBLICATIONS (refereed journal articles)

1. Samani, Z.A. and L.S. Willardson, "Soil Hydraulic Stability in a Subsurface Drainage System," Trans. of ASAE 24 (3), 1981.
2. Hargreaves, G.H. and Z.A. Samani, "Estimating Potential Evapotranspiration". Journal of Irrigation and Drainage Engineering, ASCE 108 (IR3), September 1982
3. Hargreaves G.H. and Z.A. Samani, "Economic Consideration of Deficit Irrigation". Journal of Irrigation and Drainage Engineering , ASCE 110(IR4), December 1984.
4. Hargreaves, G. H. and Z. A. Samani, "Reference Crop Evapotranspiration from Temperature," paper published in the Journal of Applied Engineering in Agriculture, Vol. 1, No.2,1985.
5. Fangmeier, D.D., Z.A. Samani, D. Garrot and D.T. Ray, "Water Requirements of Guayule for Rubber Production," ASAE Transaction, Vol. 28 (6), 1985.
6. Samani, Z.A., Wynn R. Walker and Lyman S. Willardson, "Infiltration Under Surge Flow Irrigation," ASAE Transaction, Vol. 28 No. 5 1985.
7. Samani, Z.A. and M. Pessarakli, "Estimating Potential Crop Evapotranspiration with Minimum Data in Arizona," ASAE Transaction, Vol. 29 (2), 1986.
8. Hargreaves, G. H. and Z. A. Samani, "Crop Yield, Economic Considerations of Deficit Irrigation," Handbook of Civil Engineering, Technomic Publishing, New Jersey, 1986.
9. Samani, Z. A. and G. H. Hargreaves, "Estimating Rainfall Probabilities from Average Values," "ASAE Journal of Applied Engineering in Agricultural, Vol.2, No.2, November 1986.

10. Samani, Z. A. and G. H. Hargreaves, Discussion on "Data Requirements for Evapotranspiration Estimation," *Journal of Irrigation and Drainage Engineering*, ASCE, Vol. 11, No.4 December 1986.
11. Hargreaves, G. H. and Z. A. Samani, "Simplified Irrigation Scheduling and Crop Selection for El Salvador," *ASCE Journal of Irrigation and Drainage Engineering*, Vol. 113, No.2, May 1987.
12. Samani, Z. A. and L. S. Willardson, "Simple Laboratory Measurement of Unsaturated Hydraulic Conductivity," *ASCE Journal of Irrigation and Drainage Engineering*, Vol.113, No.3, August 1987.
13. Samani, Z. A., and G. H. Hargreaves, Edgar Zuniga, and A. Keller, "Predicting Crop Yield from Synthesized Weather Data," *ASAE Journal of Applied Engineering in Agriculture*, Vol.3, No. 2, pp. 290-294, 1988.
14. Samani, Z. A. and G. H. Hargreaves, "Estimating Standard Deviation of Evapotranspiration," *ASCE Journal of Irrigation and Drainage*, 114(1),1988.
15. Samani, Z. A., "Discussion of Paper Number 21965-IR, Evapotranspiration Estimates in Extremely Arid Areas," *Journal of Irrigation and Drainage Engineering*, Vol. 115:907-912, 1989.
16. Hargreaves, G. H., Z. A. Samani, and Edgar Zuniga, "Modeling Yields from Rainfall and Supplemental Irrigation," *ASCE Journal of Irrigation and Drainage Engineering*, Vol. 155, No.2., 1989
17. Samani, Z. A., Alie Cheraghi and Lyman Willardson, "Water Movement in Horizontally Layered Soils," *ASCE Journal of Irrigation and Drainage Engineering*, Vol. 115, No. 3, 1989.
18. Samani, Z. A. and G. H. Hargreaves, "Application of a Climatic Data Base for Africa," *International Journal of Electronics and Computer in Agriculture*, Vol.3, 1989.
19. Zohrab Samani, Muluneh Yitayew, "Changes in Soil Properties Under Intermittent Water Application," *Journal of Irrigation Science* 10:177-182, 1989.
20. Zohrab Samani, A. Blair, "A simple Method for Measuring Unsaturated Hydraulic Conductivity" *ASAE, Journal of Applied Engineering in Agriculture* Vol.6, No.3 pp.285-288, 1990.
21. Zohrab Samani, Saeed Jorat and M. Yousaf, "Hydraulic Characteristics of Circular Flume" *ASCE Journal of Irrigation and Drainage*, Vol. 117, No.4 1991.
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Professional Registration:

Registered Professional Engineer (PE), Water Resources and Agricultural Engineering, State of Utah and State of New Mexico

Honor Societies:

Sigma Xi,
Phi Kappa Phi,
Who's Who International,
Who's Who Among American Teachers.
Chi-Epsilon

Language Capabilities:

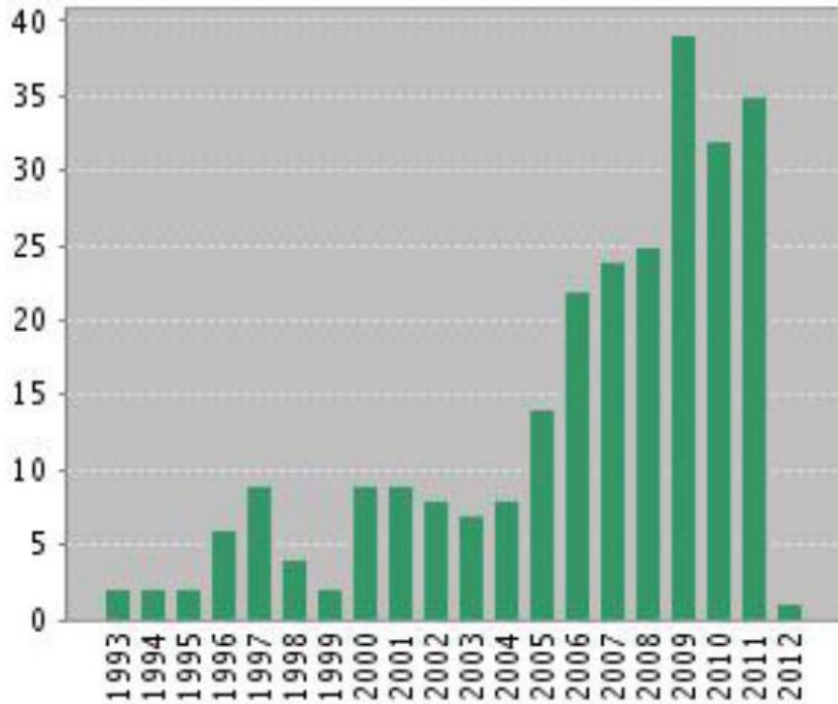
Fluent in:

Persian, English, Turkish, Spanish, Dari

Some knowledge of, Arabic and Portuguese.

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