

# Resume

**Clinton P. Richardson**, Associate Professor

Department of Environmental Engineering

New Mexico Institute of Mining and Technology

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## EDUCATION

UNIVERSITY OF KANSAS, Lawrence, Kansas, Ph.D.

Civil Engineering 1987

UNIVERSITY OF TEXAS, Austin, Texas, M.S.

Environmental Health Engineering 1976

WESTERN KENTUCKY UNIVERSITY, Bowling Green, Kentucky, B.S.

Environmental Engineering Technology 1974

## PROFESSIONAL REGISTRATION

Commonwealth of Kentucky, P.E. #12232

State of New Mexico, P.E. #11229

## AFFILIATIONS

Air and Waste Management Association

Water Pollution Control Federation

American Water Works Association

Association of Environmental Engineering and Science Professors

## EMPLOYMENT HISTORY

1987-05 New Mexico Institute of Mining and Technology, Department of Environmental Engineering,  
Socorro, New Mexico, Associate Professor

1977-81 Kentucky Department for Natural Resources and Environmental Protection, Frankfort, Kentucky,  
Environmental Engineer V, P.E.

1976-76 Institute for Mines and Minerals Research, University of Kentucky, Lexington, Kentucky,  
Environmental Scientist

## PUBLICATIONS, REPORTS, AND PRESENTATIONS

Rowe, D.R. and Richardson, C.P. (1974). "Sorption of Manganese by Barren River Bottom Sediments." Faculty Research Publication Grant #5030372-32, Western Kentucky University.

Richardson, C.P. and Ledbetter, J.O. (1978). "Hydrocarbon Emissions from Refinery Wastewater Aeration." *Industrial Wastes*, 24 (4), 26-18.

Richardson, C.P. and Parr, A.D. "The Effect of Hydraulic Conductivity on Pore Water Uptake by Agricultural Runoff", Kansas Water Resources Research Institute, Publication #G1226-04, March, 1987.

Parr, A.D., Richardson, C.P., Lane, D.D., and Baughman, D. (1987). "Pore Water Uptake by Agricultural Runoff." *J. Environmental Engineering*, ASCE, 113 (1), 49-63.

Richardson, C.P. and Parr, A.D., "Non-Point Source Pollution: A Diffusional Model." National Conference on Hydraulic Engineering and Engineering Hydrology Symposium (ASCE), Williamsburg, Virginia, August 3-7, 1987.

Richardson, C.P. and Parr, A.D. (1988). "Modified Fickian Model for Solute Uptake by Runoff." *J. Environmental Engineering*, ASCE, 114 (4), 792-809.

Richardson, C.P. and Parr, A.D., "A Frictional Resistance Model for the Analysis of Non-Point Source Pollution Processes." Third National Conference on Hydrology Symposium (ASCE), New Orleans, Louisiana. August 14-18, 1989.

Christiansen, P. *et al.* (1990). New Mexico Environment: Dance of the Interests, Report of the Sixth New Mexico Town Hall, New Mexico First.

Richardson, C.P. and Green, V. "A Process Performance Evaluation of the Socorro Wastewater Treatment Facility", Engineering Report to the Socorro City Council, Socorro, New Mexico, September 13, 1990.

Richardson, C.P. and Parr, A.D. (1991). "Friction and Free Surface Flow Over Porous Media." *J. Hydraulic Engineering*, ASCE, 117 (11), 1496-1512.

Kieft, T.L., *et al.* "Bioremediation of Oilfield Production Pit Sludges." Waste Management Education Research Consortium (WERC) Technology Development Conference, Los Alamos National Laboratory, Los Alamos, New Mexico, April 22-23, 1991.

Payne, D., *et al.* "Non-point Source Pollution Due to Runoff over Sandy Soil." Proceedings of Environmental Engineering Sessions of Water Forum '92 (ASCE), Baltimore, Maryland, August 2-6, 1992, 439-444.

Russell, C. and Richardson, C.P., "Treatment of Fruitland Coal Production Water with Ion Exchange Media." International Unconventional Gas Symposium (INTERGAS '95), Tuscaloosa, Alabama, May 16-19, 1992.

Richardson, C.P. *et al.* "Contaminated Filter Remediation and Stabilization", Emerging Technologies in Hazardous Waste Management Symposium VIII, American Chemical Society, Birmingham, Alabama, September 10, 1996.

Richardson, C.P. "Peat Filters as an Alternative On-Site Residential System: A Design, Operation, and Performance Overview", Engineering Report to the Bernalillo County Environmental Health Department, Bernalillo County, New Mexico, October, 1996

Richardson, C.P., "Basic Principles and Limitations of Predictive Modeling: Data Input and Levels of Confidence." Mining Law and Technology Conference, Socorro, New Mexico, September 4-6, 1997.

Richardson, C.P., *et al.* "Control of Gas-Phase Chlorobenzene Using TiO<sub>2</sub>-mediated Photo-catalysis and Packed-Bed Absorption." Eighth International Symposium on Chemical Oxidation, Vanderbilt University, Nashville, Tennessee, April 1-3, 1998.

Richardson, C.P., "Seismic Stability Analysis of Landfill Closure Veneers." Arid Landfill Climate Symposium, Solid Waste Association of North America, Santa Fe, New Mexico, April 15, 1998.

Martin, R.S. and Richardson, C.P. "Alumni Assessment of New Mexico Tech's B.S. Environmental Engineering Curriculum." Air and Waste Management Association Annual Conference, Seattle, Washington, June 21-25, 1998.

Halbert, C.P. IV *et al.* "Investigation into the Degradation of Chlorobenzene in a Three-phase Photocatalytic Reactor" 31<sup>st</sup> Mid-Atlantic Industrial and Hazardous Waste Conference, Storrs, Connecticut, June 21, 1999.

Richardson, C.P. "Seismic Stability Analysis of Landfill Design: A Shaky Overview of Current Civil Engineering Practice in the United States, China University of Geosciences, Wuhan, China, June 9, 2000.

Richardson, C.P. "An Overview of the Basic Framework of Environmental Regulations in the United States", Hubei Province Environmental Protection Agency, Wuhan, China, June 10, 2000.

Perry, V.R. and Richardson, C.P. "The New Mexico Tech Master of Science Teaching Program: An Exemplary Model of Inquiry-based Learning." 31<sup>st</sup> ASEE/IEEE Frontiers in Education Conference, Reno, Nevada, October 10-13, 2001.

Richardson, C.P. and Bonmati, E. "Remediation of TNT-Contaminated Soil Using *In-situ* Enzymatic Treatment Coupled with Conventional Landfarming Practice, Technical Completion Report, Waste Management, Education and Research Consortium, August, 2003.

Richardson, C.P. "Phytoremediation of 2,4,6-Trinitrotoluene Contaminated Soils using Nitrate Reductase Enzyme Extract from *Spinacia oleracea*", New Mexico Environmental Health Conference, Albuquerque, New Mexico, October 18, 2004.

Richardson, C.P. and Bonmati, E. "Phytoremediation of TNT-contaminated Soil using Nitrate Reductase Enzyme *Spinacia oleracea*", Platform presentation, International Conference on Environmental Science and Technology, American Academy of Sciences, New Orleans, La. January 23-26, 2005.

Richardson, C.P. and Bonmati, E. (2005) "2,4,6-Trinitrotoluene Transformation Using *Spinacia oleracea*: Saturation Kinetics of the Nitrate Reductase Enzyme" *J. Environmental Engineering*, ASCE, 131 (5), 800-809.

Richardson, C.P. and Tripp, G.A. "An Investigation of Boundary Shear Stress and Pollutant Detachment From an Impervious Surface During Simulated Urban Storm Runoff" accepted for publication ASCE Journal of Environmental Engineering, May, 2005.

Hawkins, J.S., Yeamens, B.J., Eckman, H.M., Richardson, C.P., and Ghosh, A. "Mobile Collection and Separation Vehicle for Use in Concentrated Animal Feeding Operations", accepted for platform presentation Animal Agriculture and Processing: Managing Environmental Impacts, Air and Waste Management and Water Environment Federation Specialty Conference, St. Louis, Mo. August 31 - Sept. 2, 2005.

#### MANUSCRIPTS SUBMITTED

Richardson, C.P. and Bonmati, E. "Phytoremediation of TNT Contamination in Unsaturated Soil Using Sequential Application of *Spinacia oleracea* Nitrate Reductase Enzyme" submitted to ASCE Journal of

Environmental Engineering, February, 2004.

## RESEARCH and ENGINEERING CONTRACTS

New Mexico Mining and Mineral Resources Research Institute, 1989-90. "Bioaccumulation of Residual Heavy Metals by Activated Algae." \$6,034

Waste Management Education and Research Consortium, 1990. "Slurry-phase Bioremediation of Oilfield Production Pit Sludges." Phase I. \$74,976

Research Council, New Mexico Institute of Mining and Technology, 1990-91. "An Investigation of Boundary Shear Stress and Pollutant Detachment from Impervious Surfaces During Storm Runoff." \$10,819

City of Socorro, 1990. "A Process Performance Evaluation of Socorro Waste Water Treatment Facility." \$10,000

Waste Management Education and Research Consortium, 1991, "Slurry-phase Bioremediation of Oilfield Production Pit Sludges." Phase II, (Co-PI) \$55,000

New Mexico Mining and Mineral Resources Research Institute, 1991. "Pretreatment of Oilfield Production Sludges for Enhanced Bioremediation Potential Using Advanced Oxidation Processes." \$5,907

Research Council, New Mexico Institute of Mining and Technology, 1991-92. "Evaluation of Endogenous Respiration of Activated Sludge Using Batch Respirometer and Volatile Suspended Solids Data." \$1,000

Waste Management Education and Research Consortium, 1994. "Sequential Biological Treatment of Groundwater Contaminated with Carbon Tetrachloride and Nitrate." (Co-PI) \$57,855

City of Socorro, 1995. "Landfill Closure and Post-Closure Plan." \$13,846

Bernalillo County Environmental Health Department, Bernalillo County, New Mexico, 1996. "Evaluation of Alternative Effluent Drainfields for On-site Wastewater Treatment Systems." (Co-PI) \$29,338

Waste Management Education and Research Consortium, 1996. "Treatment of Chlorinated Organics Vapors Using TiO<sub>2</sub>-mediated Photo-catalysis and Packed-Bed Absorption." (Co-PI) \$89,949

Fulbright-Hays, Department of Education, Group Projects Abroad Program, 1999. "Ghanaian Environmental Science Seminar and Cross-Cultural Studies." (Co-PI) \$60,000

Fulbright-Hays, Department of Education, Group Projects Abroad Program, 2000. "Chinese Area Studies in Water Law and Water Quality: An Intercultural Perspective." (Co-PI) \$66,000

Fulbright-Hays, Department of Education, Group Projects Abroad Program, 2001. "Brazilian Area Studies in Air Quality and Ecology: An Intercultural Perspective of Urban Airsheds, Sensitive Ecosystems, and Remote Region Atmosphere/Biosphere Exchange." (Co-PI) \$56,000

Waste Management Education and Research Consortium, 2003. "Remediation of TNT- and RDX-Contaminated Soils Using *In-situ* Enzymatic Treatment Coupled with Conventional Land-farming Practice." (PI) \$7,470

Waste Management Education and Research Consortium, 2003. "Enzymatic Treatment of TNT- and RDX-contaminated Soil Using Spinach Extract." (PI) \$60,000

## Classes Taught at New Mexico Tech

ES 216 Fluid Mechanics 3cr

ES 301 Statics 3cr

ES 350 Heat and Mass Transfer 3cr

ES 405 Instrumental and Process Control 3cr

ED 431 Fluid and Thermal Systems 3cr

ME 410 and 410L Environmental Issues\* 4cr

ENVE 108 Introduction to Water Quality and Water Treatment (summer mini-course) 1cr

ENVE 201 Introduction to Environmental Science and Engineering\* 3cr

ENVE 302 Environmental Law and Regulations 2cr

ENVE 312 Water and Wastewater Treatment 3cr

ENVE 303 Water Treatment Process Design 2cr

ENVE 304 Wastewater Treatment Process Design 2cr

ENVE 306 Water and Wastewater Laboratory 1cr

ENVE 401 Air Pollution Engineering 3cr

ENVE 426 Industrial Case Studies in Environmental Engineering 3cr

ENVE 411 Solid and Hazardous Waste Management\* 4cr

ENVE 414 Environmental Engineering Laboratory 2cr

ENVE 431 Water and Wastewater Systems Hydraulic Design 3cr

ENVE 490 Senior Design 3cr

ENVE 503 Environmental Risk Assessment 3cr

ENVE 511 Water Quality Management and Control 3cr

ENVE 512 Industrial Water and Wastewater Treatment 3cr

ENVE 520 Hazardous Waste Site Remediation 3cr

ENVE 522 Geotechnical Waste Containment Design\* 3cr

ST 544 Geological and Environmental Engineering for Teachers 2cr

ST 589/581 Treatment of Ghanaian Groundwater for Arsenic Removal/Directed Study (Ghana) 2cr/1cr

ST 589/581 Law and Regulations for Water Resources Management/Directed Study (China) 2cr/1cr

ST 589/581 Introduction to Air Pollution and Air Quality Management/Directed Study (Brazil) 2cr/1cr

ST 589/581 Introduction to Natural Ecosystems and Ecological Concepts/Directed Study (Brazil) 2cr/1cr

\* Taught also as a WERC Interactive TV Class

### **Journal Reviewer**

ASCE Journal of Environmental Engineering

ASCE Journal of Hydraulic Engineering

Biotechnology and Bioengineering

Journal of Solid Waste Technology and Management

Natural Areas Journal

### **Proposal Reviewer**

Southwest Center for Environmental Research and Policy (SCERP)

Department of Agriculture Small Business Innovation Research (SBIR) Program

Wyoming Water Research Program (WRP) Competitive Grant Review

### **Book Reviewer**

McGraw-Hill, Inc., Davis, M.L. and Cornwell, D.A., "Introduction to Environmental Engineering, 3<sup>rd</sup> ed."

University of Nebraska Press, Sylvia Rodriguez, "Acequia: Water-sharing, Sanctity, and Place"

### **WERC Environmental Engineering Design Contest Faculty Advisor (1991-2005)**

2003 2<sup>nd</sup> Place Task 14

Reduction of Fecal Bacterial Load in Produce Irrigation Water Using Peroxyacetic Acid

2002 1<sup>st</sup> Place Task 8

Remediation of Explosive Contaminated Soil through Use of Zero-valent Iron and Spinach

2001 1<sup>st</sup> Place Task 11

Hydrofluoric Acid Recovery Using Electrodialytic Bipolar Membranes

1999 2<sup>nd</sup> Place Overall

Mine Tailing Stabilization Using Permeable Reactive Walls (2<sup>nd</sup> Place Task 1)

Suppression and Immobilization of Radioactive Hazards Encountered During Deactivation and Decommissioning (2<sup>nd</sup> Place Task 2)

Passive Dry Barrier Closure Cap: Solar Induced Through-circulation Drying of Infiltration (2<sup>nd</sup> Place Task 3)

1998 2<sup>nd</sup> Place Task 2

Supercritical Carbon Dioxide Blasting of Plutonium Contaminated Concrete

*Judges' Choice for Innovation*1997 3<sup>rd</sup> Place Task 3

Plutonium Contaminated HEPA Filter Remediation Using High Gradient Magnetic Separation

*Judge's Choice for Innovation*1996 1<sup>st</sup> Place Task 2

Treatment of Multi-contaminant Filter Waste by Mechanical Mass/Volume Reduction, Distillation, and Surface-modified Zeolite Ion Exchange

*Best Design Paper*

1995 Innovation Award

Electrokinetics and Supercritical Water Oxidation as a Method for the Treatment of Defense Related Waste

*Judge's Choice for Innovation*1993 4<sup>th</sup> Place Overall

A Proposal to Remediate and Minimize a Circuit Board Plating Waste Stream Containing Copper, Tin, Lead, Organics, Ethylenediaminetetracetic Acid, Fluoroacetic Acid, and Fluoroboric Acid

1992 3<sup>rd</sup> Place Overall

Remediation of Organically-bound Lead, Hexavalent Chromium, Diesel Fuel, Trichlorethylene, and Uranium Contaminated Soil by Soil Washing, Froth Flotation, Acetate Leaching and Thickening

1991 1<sup>st</sup> Place Overall

Treatment of Trichloroethylene, 1,2-Dichloroethane, Hexavalent Chromium, and Fluoride Contaminated Wastewater

*Best Design Paper and Best Presentation***Early Alert Initiative Young Scholars Program Mentor**

1991 Evaluation of Endogenous Respiration in Activated Sludge Using Batch Respiratory and ATP

1992 Characterization of Activated Algae Using Batch Respirometry Under Light and Dark Cycles

1993 Comparison of Oxygen Transfer for Horizontal and Vertical Flow Aeration

**New Mexico Tech Admissions Breakfast Reception Invited Speaker**Environmental Concerns of the Future from an Educational Perspective

Hazardous Waste Site Remediation: Our Intellectual Capital is Thin, But Gaining Weight

**Departmental Service**

1997-1999 Department Chair Mineral and Environmental Engineering

1999-2002 Department Chair Environmental Engineering

1993 ABET Environmental Engineering Accreditation Report Vol II (Lead Author)

1996 ABET Environmental Engineering Accreditation Report Vol II (Lead Author)

1996 Proposal for a Master of Science in Environmental Engineering (Lead Author)

### **Institute Service**

#### **Committees**

Nominating Committee, Discipline Committee, Student Handbook Alcohol and Drug Abuse Policy Committee, Financial Aid and Scholarship Committee, Tenure Review Committee Chair (Martin, Huang, Deng, Cal); Tenure Review Committee Member (Heagy, Reiss)

New Mexico Science Fair Judge

New Mexico Science Olympiad Event Judge

New Mexico Tech Consulting Scientist Speaker

New Mexico Tech Environmental Science Program Advisory Committee

New Mexico Tech Rugby Football Club Faculty Advisor

New Mexico Tech Women's Rugby Football Club Coach

### **External Reviewer for Promotion and Tenure**

Department of Civil and Environmental Engineering, University of Missouri-Columbia

### **Short Course Taught**

Instituto Tecnologico de Durango, Durango, Mexico, Sanitary Landfill Design, Construction, and Operation, Oct. 1994

### **Faculty Advisor for Senior Design Theses (Enve 490)**

1989 Immobilization of Low Level Radioactive Waste using Geopolymerization

1989 Phases of Groundwater Remediation: A Case Study of Groundwater Contamination at Hewlett Packard, Loveland, Colorado

1989 A Theoretical Comparison of Oxygen Transfer for Horizontal and Vertical Flow Aeration

1989 Biological Removal of Low Level Organics for Potable Water Treatment: A Research Proposal

1989 Design of Bench-Scale Activated Algae System for Aqueous Heavy Metal Removal

1989 Feasibility Study of Using a Combination of Biodegradation and Photodegradation as an Above Ground Treatment for PCB-Contaminated Soils

1991 Vacuum Extraction of BTEX from the Vadose Zone: A New Mexico Case Study and Design Proposal

1991 Design of Air Pollution Abatement for a Perlite Mining and Sizing Operation

1992 Preliminary Design of a Solar Incinerator Facility



- 1992 Energy from Citrus Wastes in Belize: An Industrial Overview
- 1992 Preliminary Design for Corrosion Control in a Flue Gas Desulfurization System at Bisquik Cooperative Electric
- 1992 Slurry-Phase Biodegradation Enhanced by AOP Pretreatment
- 1992 A Proposal to Stabilize a Contaminated Soil by *In-situ* Vittrification
- 1992 Preliminary Design of a Constructed Wetland Treatment System for the City of Socorro, New Mexico
- 1992 *In-situ* Remediation of a Los Lunas Gasoline Contaminated Site by Vapor Extraction
- 1992 Mercur Gold Mine Waste Identification/Characterization/Management Project
- 1993 Preliminary Design of Collection and Treatment of Domestic Wastewater for the Village of Sanford, Texas
- 1993 Preliminary Design of a Yard Waste Composting Plant for the County of Socorro, New Mexico
- 1993 Design of Photocatalytic Reactor to Remove Color in a Textile Wastewater Stream
- 1993 Enhanced Bioremediation of a Soil Contaminated with Crude Oil by Pretreatment with Fenton's Reagent
- 1993 Recovering Resources from Municipal Solid Waste: A Feasibility Study for Southeastern New Mexico
- 1993 Wastewater Collection and Treatment for La Union, New Mexico
- 1993 Design of Activated Carbon Fluidized Bed Bioreactor for the Biodegradation of TNT
- 1993 Design of an Artificial Lighting System for Winterkill Prevention
- 1994 *In-situ* Remediation of a Gasoline Contaminated Site in Plainview, Texas using Soil Vapor Extraction
- 1994 Implementation of Air Pollution Control and product Recovery Equipment on an Existing Soil and Groundwater Remediation System
- 1994 Wastewater Minimization Project for Intel Corporation, Rio Rancho, New Mexico
- 1994 The Leach and Seal Soil Remediation Process: A Feasibility Study
- 1994 Low Temperature Thermal Desorption of Petroleum Contaminated Soils
- 1994 Reclaiming Wastewater for Irrigation at New Mexico Tech
- 1994 Options for the Clean-up of Nitrate Contaminated Groundwater at the Inhalation Toxicology Research Institute, Albuquerque, New Mexico
- 1995 Design of Soil Washing System to Treat Lead and Radionuclide Contamination
- 1995 Water Distribution System Analysis for TA-16 at LANL
- 1995 Design of an Advanced Oxidation System for Removal of Volatile Organic Compounds from Groundwater
- 1996 Removal of Arsenic and Fluoride from Groundwater using Activated Alumina

- 1996 Design of a Materials Recovery and Monitoring Facility for Los Alamos National Laboratory
- 1996 Expansion of the Delaware County Solid Waste Management Center to Include a Fiber Recovery Facility
- 1996 Evaluation of Soil Washing as an Effective Treatment Technology to Remediate Lead Contaminated Soil at the Cal West Metals Superfund Site
- 1996 Design of a Reverse Osmosis Facility for Treatment of a High-Nitrate Groundwater Supply
- 1996 Design of an Anaerobic Wetland to Treat Acid Mine Drainage at Mount Washington Mine in Vancouver, Canada
- 1996 Water Distribution System Analysis for the Polvadera Mutual Domestic Water Consumer's Association, Inc.
- 1997 Cold Climate Wastewater Treatment for Rural Alaska
- 1997 Copper Flats Reclamation Plan: Phase I
- 1997 On-site Soil-Washing Design for the Treatment of Natural Uranium and Depleted Uranium Contaminated Soils at a Former High Explosives Firing Site
- 1997 Spent Nuclear Fuel Reprocessing Facility
- 1997 Alternatives to a Conventional Septic System
- 1997 Design Parameters for a Residential Subsurface Flow Constructed Wetland in Amalia, New Mexico
- 1997 Viability of Landfill Gas to Energy Production in the State of New Mexico
- 1998 Design of a Subsurface Flow Wetland to Treat Septic Tank effluent in a Small Community Southwest of Grants, New Mexico
- 1998 Reclaiming a Remediated Surface Mining Operation Using Water Harvesting
- 1998 Remediation of Groundwater Contaminated with TCE and PCE
- 1999 Redesigning the Potable Water System of San Miguel Uspantan, Guatemala: A Feasible Approach to Improving the Water Quality
- 1999 Land Reclamation Plan for a Surface Coal Mining Operation
- 1999 La Foret Lagoon Design
- 2000 Electrokinetic Treatment of Nitrate-Contaminated Groundwater using Permeable Wall Technology (WERC Environmental Engineering Design Contest Entry)
- 2001 Mining Pit Wall Stabilization (WERC Environmental Engineering Design Contest Entry)
- 2002 Paliza Campground Water Distribution and Treatment Analysis and Design for Santa Fe National Forest
- 2004 Preliminary Design of a Slow Rate Infiltration System for the Town of Chaparral, New Mexico

#### Graduate Theses

Rhodes, V.A. (1991) "Laboratory Study of Geogrid-Reinforced Clay-Sand Mixtures from Cenozoic Basin-Fill Deposits, Central New Mexico", MS Mineral Engineering, Committee Member

- Tripp, G.A. (1992) "An Investigation of Boundary Shear Stress and Pollutant Detachment from an Impervious Surface During Simulated Urban Storm Runoff", MS Mineral Engineering, Research Advisor
- Russell, C.S. (1994) "Desalination of Bicarbonate Brine Waters: Experimental Findings Leading to an Ion Exchange Process Design", MS Engineering Science with Mechanics Option, Research Advisor
- Montalvo, R. (1995) "Kinetic Modeling of the  $\text{TiO}_2$  Assisted Photoreduction of Cr (IV) to Cr (III) in Aqueous Solution", MS Materials Engineering, Committee Member
- Robbins, R. (1997) "Trace Metals in *Pyganodo grandis* and Associated Sediments in Conchas Lake, New Mexico, MS Biochemistry, Committee Member
- Fan, T. (1997) "Treatment of Chlorinated Organic Vapor Using  $\text{TiO}_2$ -Mediated Photocatalysis and Packed - Bed Absorption", MS Chemistry, Committee Member
- Halbert, C.P. IV (1998) "Bench-scale Study of the Feasibility of Using  $\text{TiO}_2$ -Mediated Photocatalysis for the Control of Gaseous Chlorobenzene Emissions", MS Environmental Engineering, Co-Research Advisor
- Agnihotri, S. (2001) "Destruction of 1,1,1-Trichloroethane (TCA) Using Non-thermal Plasma Generated in a Dielectric Barrier Discharge Reactor of Planar Geometry", MS Environmental Engineering, Committee Member
- Gu, C. (2001) "Hyperfiltration-Induced Precipitation of Sodium Chloride by Clay Membranes", MS Environmental Engineering, Committee Member
- Houston, K.S. (2001) "Plasma Modified Membranes for Gas and Liquid Separations", MS Environmental Engineering, Committee Member
- Guerra, P.A. (2002) "Molecular Biology Tools for Assessing Biodegradation of Dihalooethane Contamination in Groundwater", MS Environmental Engineering, Committee Member
- Shi, Y. (2002) "Reduction of  $\text{Co}^{\text{III}}$ -EDTA by  $\text{Fe}^{\text{II}}$  in Aqueous Phase", MS Environmental Engineering, Committee Member
- Lees, D. (2003) "A Baseline Measurement of Atmospheric Trace Gases in the Continental Free Troposphere and Concurrent Measurements in the Continental Boundary Layer in Central New Mexico", MS Environmental Engineering, Committee Member
- Prien, J.L. (2003) "Measurement of the Soil/Water Partitioning Coefficients for 2,4,6-Trinitrotoluene and 2,4-Dinitrotoluene under Varying Soil Saturation Levels", MS Environmental Engineering, Committee Member
- Torres, D. (2003) "Concentration-Polarization Induced Precipitation of NaCl", MS Environmental Engineering, Committee Member
- Bonmati, E. (2003) "TNT Degradation Using *Spinacia oleracea* Nitroreductase" MS Environmental Engineering, Research Advisor
- Stokes, K.A. (2005) "Enzymatic Treatment of TNT- and RDx-contaminated Soil Using *Spinacia oleracea* Nitroreductase" MS Environmental Engineering, Research Advisor

Graduate Research Advisor (2005)

Medina, A.S.