

CURRICULUM VITAE

Dr. Martha C. Mitchell

Professor, Chemical and Materials Engineering
Dept. of Chemical and Materials Engineering, MSC 3805
College of Engineering
New Mexico State University
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Las Cruces, New Mexico 88003-8001

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EDUCATION

B.S. (Chemical Engineering) University of Wisconsin-Madison, 1989
Ph.D. (Chemical Engineering) University of Minnesota-Minneapolis, 1996
Thesis Title: Predicting Adsorption of Fluids Confined to Nanoporous Media

EXPERIENCE

Professor, Department of Chemical and Materials Engineering
New Mexico State University, Las Cruces, NM. Fall 2007 – present

Associate Dean for Research
College of Engineering
New Mexico State University, Las Cruces, NM February 2012 – August 2015

Academic Department Head
Department of Chemical Engineering
New Mexico State University, Las Cruces, NM May 2005 – January, 2012

Interim Academic Department Head
Department of Chemical Engineering
New Mexico State University, Las Cruces, NM August 2004 – April 2005

Associate Professor, Department of Chemical Engineering
New Mexico State University, Las Cruces, NM. Fall 2002 – Fall 2007

Assistant Professor, Department of Chemical Engineering
New Mexico State University, Las Cruces, NM. Fall 1996 – Fall 2002

Visiting Summer Faculty,
Sandia National Laboratories, Albuquerque, NM. Summer 2001

Visiting Professional,
Exxon Research and Engineering, Annandale, NJ. Summer 1997

Lecturer, Department of Chemical Engineering and Materials Science
University of Minnesota-Minneapolis, Minneapolis, MN, 1/95—3/96

ADMINISTRATIVE ASSIGNMENTS

Compliance Committee, NMSU, (2014-2015)

Research Transition Team, NMSU (2013)

Graduate School Transition Team, NMSU (2013)

Intellectual Property Advisory Committee, NMSU (2012-present)

New Mexico Consortium Board member (2012-present)

Council of Deans of Research (CADRe), NMSU (2012-present)

Building the Vision Strategic Planning Committee, NMSU (2012-2013)

Research and Economic Development Committee (RED), NMSU (2010-2012)

Area 01 Committee Chair, American Institute of Chemical Engineers (2009-2010)

Planning Chair, Fall 2008 Annual AIChE meeting (2008)

Primary Undergraduate Advisor and New Student Registration Advisor (2004-2012)

Coordinator for wind tunnel site cleanup (2006-2007)

Graduate Studies Committee, Chair (2004-2005)

Faculty Search Committee Chair, Department of Chemical Engineering (2003)

Chair, Development of Engineering White Paper, “Promoting Interdisciplinary
Collaboration” (2003)

PROFESSIONAL DEVELOPMENT ACTIVITIES

Advancing Leaders Program, New Mexico State University (2006).

Women in Engineering Leadership Institute (2005)

ASSESSMENT ACTIVITIES

American Institute of Chemical Engineers Education and Accreditation Committee
(2015-present)

Coordinated Department of Chemical Engineering Self-Study for ABET accreditation
2006 and 2012.

PROFESSIONAL REGISTRATION

Professional Engineer, NM#15571

PUBLICATIONS

1. Flores, L. Y., Navarro, R. L., Lee, H. S., Addae, D. A., Gonzalez, R., Luna, L. L., Jacquez, R., Cooper, S., & Mitchell, M., “Academic satisfaction among Latino/a and White men and women engineering students,” (2014) *Journal of Counseling Psychology*, **61**(1), doi: 10.1037/a0034577.
1. Upadhyayula, V.K.K., Deng, S., Smith, G.B., and Mitchell, M.C., “Adsorption of *Bacillus subtilis* on Carbon Nanotube Aggregates, Activated Carbon and NanoCeram™,” (2009) *Water Research*, **43**, 148-156.
2. Upadhyayula, V.K.K., Ghoshroy, S., Nair, V.K., Smith, G.B., Mitchell, M.C., and Deng, S., (2008) “Single-Walled Carbon Nanotubes as Fluorescence Biosensors for Pathogen Recognition in Water Systems” *Res. Lett. Nanotechnology*, Volume 2008, Article ID 156358, 5 pages, doi:10.1155.
3. Upadhyayula, V.K.K., Deng, S., Mitchell, M.C., Nair, V.K., Smith, G.B., and Ghoshroy, S., “Adsorption kinetics of *Escherichia coli* and *Staphylococcus aureus* on single-walled carbon nanotube aggregates” (2008) *Water Science & Technology* **58**(1):179-184.
4. Mitchell, M.C., Rakoff, R.W., Jobe, T.O., Sanchez, D.L., and Wilson, D.B., “Thermodynamic Analysis of Equations of State for the Monopropellant Hydrazine,” (2007) *Journal of Thermophysics and Heat Transfer*, **21**: 243-247.
5. Gallo, M., Nenoff, T.M., and Mitchell, M.C., “Selectivities for Binary Mixtures of Hydrogen/Methane and Hydrogen/Carbon Dioxide in Silicalite and ETS-10 by Grand Canonical Monte Carlo Techniques,” (2006) *Fluid Phase Equilibria*, **274**: 135-142.
6. Mitchell, M., Rakoff, R., Jobe, T., Sanchez, D., Wilson, D.B., and Saulsberry, R. “A Thermodynamic Description for MILSPEC Hydrazine,” (2004) *Proceedings of the 3rd International Workshop on Hydrazine, Sardinia, Italy*.

7. Bandini, P., Cook, J., Mitchell, M.C., & Riley, L. A., "A New Paradigm for Optimizing Hybrid Simulations of Rare Event Modeling for Complex Systems," (2004) *ASTC 2004 Conference Proceedings*.
8. Mitchell, M.C., Gallo, M., & Nenoff, T.M., "Molecular Dynamics Simulations of Binary Mixtures of Methane and Hydrogen in Titanosilicates," (2004) *Journal of Chemical Physics* **121**:1910-1916.
9. Frink, L. J. D., & Mitchell, M. C., "Studying ion permeation through ion channel proteins with density functional theories for inhomogeneous fluids," (2002) *Biophysical Journal* **82**:340A.
10. Mitchell, M.C., Fort, A. K., Williams, L., Wilson, D.B., & Saulsberry, R., "Thermodynamic Analysis of Compression Heating of MIL-SPEC Unsymmetric Dimethylhydrazine," (2002) *Proceedings of the 51st JANNAF Propulsion Meeting*.
11. Mitchell, M.C., Hendren, Z., Brown, M., Wilson, D.B., & Saulsberry, R., "Thermodynamic Analysis of Compression Heating of Two-Phase Monomethylhydrazine," (2002) *Proceedings of the 51st JANNAF Propulsion Meeting*.
12. Mitchell, M.C., Autry, J.D., & Nenoff, T.M., (2001) "Molecular Dynamics Simulations of Binary Mixtures of Methane and Hydrogen in Zeolite A and a Novel Zinc Phosphate," *Molecular Physics* **99**:1831-1837.
13. Mitchell, M.C., McCormick, A.V., & Davis, H.T. (1995), "Prediction of Adsorption of Xenon in Zeolite NaA With Molecular Density Functional Theory," *Zeitschrift für Physik B* **97**: 353-360.
14. Mitchell, M.C., McCormick, A.V., & Davis, H.T. (1994), "Predicting Adsorption in One-Dimensional Zeolite Pores With the Exact Theory of One-Dimensional Hard Rods," *Molecular Physics* **83**:429-437.

SPONSORED RESEARCH

Principal Investigator

"Advance Partnerships for Adaptation, Implementation and Dissemination Award: Alliance for Faculty Diversity in Stem (PAID)" **Mitchell, M. C.**, National Science Foundation, \$500,000.00, January 1, 2007 - June 30, 2011.

"Proposal for Development of a Nuclear Program at New Mexico State University," Nuclear Regulatory Commission, \$299,894, **M. Mitchell**, P. Andersen and D. Rockstraw, 6/27/2009-Sept. 30, 2010.

- “Molecular Simulation of the Effect of Operating Conditions on Transport and Adsorption of Light Gas Mixtures in ZSM-5 and Silicalite, \$16,855, **M. Mitchell**, Sandia National Laboratories, Nov 1, 2004-June 30, 2005.
- “Molecular Simulation of High Temperature Transport and Adsorption of Light Gas Mixtures in Silicotitanate Materials,” **M. Mitchell**, Sandia National Laboratories, \$24,822, April 1, 2004-Oct. 31, 2004.
- “Computer-Aided Design of Fuel/Oxidizer Operations” \$112,000, **M. Mitchell**, White Sands Test Facility, Johnson Space Center, April 1, 2003-October 31, 2005.
- “ACS Symposium on Modeling and Simulation in Surface and Colloid Science,” \$3,500, **M. Mitchell**, Petroleum Research Fund, Aug. 1, 2003-Sept. 30, 2003.
- “Molecular Simulation of Transport of Light Gas Mixtures in Zeolites,” \$19,919, **M. Mitchell**, Sandia National Laboratories, Nov. 1, 2002-Oct. 31, 2003.
- “Thermodynamic Analysis of Operational Heating of the Fuel Aerozine 50,” \$30,226, **M. Mitchell**, White Sands Test Facility, Johnson Space Center, Nov. 1, 2001-Oct. 31, 2002.
- “Modeling of Membrane Transport Using Molecular Density Functional Theory,” \$40,824, **M. Mitchell**, Sandia National Laboratories, Dec. 1, 2001-Sept. 30, 2002.
- “Molecular Simulation of Mixtures in Silicotitanate Membrane,” \$20,009, **M. Mitchell**, Sandia National Laboratories, Dec. 1, 2001-Sept. 30, 2002.
- “Molecular Modeling and Simulation for Gaseous Mixtures Adsorbed in Zeolite A and Other Novel Molecular Sieves,” \$26,979.89, **M. Mitchell**, Sandia National Laboratories (CERP program and Rio Grande Corridor Initiative), Jan. 1, 2001-Dec. 31, 2001.
- “Modeling the Separation of Binary Mixtures of Light Gases in Molecular Sieve Films: A Molecular Dynamics Study” \$109,157.30, **M. Mitchell**, Sandia National Laboratories (SURP program and Rio Grande Corridor Initiative), Oct. 1, 1998-Sept. 30, 2000.
- “Modeling Immobilization of Cs⁺ in Zeolites with Molecular Dynamics Simulations: A Feasibility Study,” \$8,000, **M. Mitchell**, Waste Management and Education Research Consortium, Sept. 25, 1998-Sept. 24, 1999.

Co-Principal Investigator

"Increasing the Success of Low-Income, Academically Talented Students in Engineering," \$1,000,000, P. Bandini, M. Dawood, S. Cooper, **M. Mitchell**, C. Papis, National Science Foundation, July 1, 2016-June 30, 2021.

"Adsorption and Diffusion of Gases in Metal-Organic Frameworks for Proton Exchange Membrane Fuel Cells," \$499,107, S. Deng, **M. Mitchell** and P. Andersen, May 1, 2006-April 30, 2009.

"MOU between NMSU and Los Alamos National Laboratory on Research and Education" Smith, D. W. (Co-Principal), Butcher, E. A. (Co-Principal), Chaitanya, V. (Principal), Oliver, R. L. (Co-Principal), Burriss, A. E. (Co-Principal), Oshima, K. (Co-Principal), Black, J. (Co-Principal), He, J. (Co-Principal), Throop, H. L. (Co-Principal), Song, M. (Co-Principal), Milligan, B. G. (Co-Principal), Andersen, P. K. (Co-Principal), **Mitchell, M. C.** (Co-Principal), Monger, H. C. (Co-Principal), Eiceman, G. A. (Co-Principal), McNamara, B. J. (Co-Principal), Kroger, J. K. (Co-Principal), Creusere, C. D. (Co-Principal), Smith, D. E. (Co-Principal), Voelz, D. G. (Co-Principal), Lakey, J. D. (Co-Principal), Ng, K. T. (Co-Principal), Wright, T. F. (Co-Principal), Wang, H. (Co-Principal), Gopalan, C. S. (Co-Principal), Deng, S. (Co-Principal), Ranade, S. J. (Co-Principal), Harrison, T. (Co-Principal), Holtzman, J. A. (Co-Principal), Hanley, K. A. (Co-Principal), Vasiliev, I. V. (Co-Principal), Hacker, K. L. (Co-Principal), Wright, J. B. (Co-Principal), Sevostianov, I. (Co-Principal), Coombs, M. J. (Co-Principal), Burton, T. D. (Other), Johnson, E. (Other), Sponsored Research, Los Alamos National Security, LLC, Sponsoring Organization Is: \$1,138.08, February 16, 2004 - September 30, 2011.

"Water and Bio-security: Innovative Membranes for Water Treatment and Smart Sensors," \$135,000, S. Deng, **M. Mitchell**, P. Andersen, K. Oshima, D. Smith, Los Alamos National Laboratory, May 1, 2005-April 30, 2007.

"Removal of Arsenic(V) and Nitrate from Natural Groundwater," \$14,234, S. Deng and **M. Mitchell**, \$14,234, Waste Management Education and Research Consortium, Jun. 1, 2005-May 30, 2006.

"Performance Prediction of Large Scientific Application to Aid Decision-Making in Computer System Utilization and System Acquisition, \$24,970, J. Cook, P. Bandini, M. Ballyk and **M. Mitchell**, NMSU Mini-grant program, July 1, 2005-June 30, 2005.

Senior Personnel

NSF Engineering Research Center for Bio-Mediated and Bio-Inspired Geotechnics P. Bandini, M. Auzenne, D. Cortes, S. Misra, and C. Monger, \$3,194,999 (Arizona State University-lead, NMSU portion), National Science Foundation, August 1, 2015-July 31, 2020. Role: diversity director.

PRESENTATIONS

- Mitchell, M.C. (2015) "Funding Opportunities from Federal Agencies," *American Society for Engineering Education Annual Meeting, Seattle, WA, June 14-17.*
- Mitchell, M.C., and Jacquez, R. (2015) "New Mexico State University Broadening Participation Activities," *National Alliance for Broader Impacts Summit, Madison, WI, May 30-June 1.*
- Mitchell, M.C., Upadhyayula, V.K.K. and Deng, S. (2008) "Adsorption of Microorganisms on Single-Walled Carbon Nanotubes and Other Porous Media" *Spring AIChE meeting, New Orleans, LA.*
- Deng, S., Upadhyayula V. K. K, Smith, G.B. and Mitchell, M.C., (2007) " Microscopic Analysis of Adsorption of E. coli and Staphylococcus aureus on Carbon Nanotubes," *AIChE Annual Meeting, Salt Lake City, Utah, Nov. 4-9.*
- Deng, S.,G., Upadhyayula, V.K.K., Smith, G.B. and Mitchell, M.C., (2007) "Adsorption Equilibrium and Kinetics of E. coli and Staphylococcus aureus on Carbon Nanotubes" *9th International Conferences on Fundamentals of Adsorption, Sicily, Italy, May 20-25.*
- Gallo, M., Mitchell, M.C., and Nenoff, T.M., (2006) "Selectivities for Binary Mixtures of Hydrogen/Methane and Hydrogen/Carbon Dioxide in Silicalite and ETS-10 by Grand Canonical Monte Carlo Techniques Fluid Phase Equilibria," *AIChE Fall Meeting, November 12-17, San Francisco, CA.*
- Upadhyayula, V.K.K. et al., (2006) "Adsorption of Bacillus Subtilus on Carbon Nanotubes and Other Porous Media," *AIChE Fall Meeting, November 12-17, San Francisco, CA.*
- Upadhyayula, V. K. K., Nenoff, T. M., Mitchell, M. C. (2005) "Computer Simulations of Adsorption and Transport of a Quaternary Mixture Including Hydrogen in ZSM-5 and Silicalite," *AIChE Fall Meeting, October 30-November 4, 2005, Cincinnati, OH.*
- Mitchell, M.C., (2005) "Predicting Selectivity for Light Gas Separations Through Inorganic Thin Film Membranes Using Equilibrium and Dynamic Computer Simulations with Classical Potentials," *Mesilla Chemistry Workshop, April 2005, Mesilla, NM.*
- Mitchell, M.C., Gallo, M., Upadhyayula, V. K. K., Nenoff, T.M., (2005) "Evaluating Materials for High Temperature Hydrogen Separation Using Grand Canonical Monte Carlo and Molecular Dynamics Simulations," *AIChE Spring Meeting, April 10-14, Atlanta, GA.*

Mitchell, M.C. (2004) "Evaluating Possible Materials for Light Gas Separations using Computer Simulations," *6th Annual New Mexico Institute of Mining and Technology Department of Chemistry Symposium, Socorro, NM.*

"Mitchell, M.C., Gallo, M., Autry, J., Nenoff, T., (2004) "Evaluating Possible Materials for Light Gas Separations Using Computer Simulations," (2004) *8th International Conference on the Fundamentals of Adsorption, Sedona, AZ, 2004.*

Mitchell, M.C., Gallo, M., Nenoff, T.M., "Molecular dynamics simulations of binary mixtures of methane and hydrogen in titanosilicates," *NATO-ASI, Fluid Transport in Nanoporous Materials, La Colle sur Loup, France, June 15-28, 2003.*

Mitchell, M.C., Gallo, M., Nenoff, T.M., (2003) "Computer simulations of binary mixtures of methane and hydrogen in titanosilicates," *226th National ACS Meeting, New York, NY, Sept. 7-11, 2003.*

Frink, L.J., Mitchell, M.C., (2003) "Studying Ion Permeation Through Ion Channel Proteins with Molecular Theories," *AICHE Annual Meeting, November 16-21, San Francisco, CA.*

Mitchell, M.C., Fort, A. K., Williams, L., Wilson, D.B., & Saulsberry, R., (2002) "Thermodynamic Analysis of Compression Heating of MIL-SPEC Unsymmetric Dimethylhydrazine," *51st JANNAF Propulsion Meeting, Orlando, FL.*

Mitchell, M.C., Hendren, Z., Brown, M., Wilson, D.B., & Saulsberry, R., (2002) "Thermodynamic Analysis of Compression Heating of Two-Phase Monomethylhydrazine," *51st JANNAF Propulsion Meeting.*

Mitchell, M.C. (2001), "Predicting Adsorption and Diffusion in Zeolites and Other Inorganic Molecular Sieves with Molecular Theory and Computer Simulations," *invited speaker, Materials Seminar, University of Texas-El Paso, March 2001.*

Mitchell, M.C., Autry, J.D, & Nenoff, T.M. (1999) "Molecular Dynamics Simulations of Light Gas Mixtures in Zeolite A and a Novel Zinc Phosphate," *AICHE 1999 Annual Meeting, Dallas, TX.*

Mitchell, M.C. (1999), "Predicting Adsorption in Zeolite NaA with Molecular Density Functional Theory," *invited speaker, Sandia National Laboratories, Albuquerque, NM, May 1999.*

Mitchell, M.C. (1999), "Statistical Mechanical Studies of Fluids Adsorbed in Zeolites: Molecular Theory and Computer 'Experiments'," *invited speaker, New Mexico Institute of Mining and Technology, Socorro, NM, March 1999.*

Mitchell, M.C. (1998), "Molecular Modeling of Adsorption in Nanoporous Media and of Other Noncontinuum Systems," *invited speaker, Dept. of Chemistry and Biochemistry Colloquium Series, New Mexico State University, Las Cruces, NM, March, 1998.*

Mitchell, M.C., McCormick, A.V. & Davis, H.T. (1997), "Grand Canonical Monte Carlo Simulations of Xenon Adsorbed in Two and Three-Dimensionally Connected Zeolite Structures," *AICHE 1997 Annual Meeting, Los Angeles, CA.*

Mitchell, M.C., McCormick, A.V., & Davis, H.T. (1994), "Predicting Adsorption in Zeolite NaA With Molecular Density Functional Theory," *AICHE 1994 Annual Meeting, San Francisco, CA.*

Mitchell, M.C., McCormick, A.V. and Davis, H.T. (1994), "Modeling Sorption in Zeolite NaA With Molecular Density Functional Theory," *10th International Zeolite Conference, Garmisch-Partenkirchen, Germany.*

HONORS

Outstanding Mentor Award, New Mexico State University Teaching Academy (2015)
Robert Davis Professorship (2008-2011)

PROFESSIONAL AND HONOR SOCIETIES

Alpha Chi Sigma Fraternity
American Association of University Women
American Institute of Chemical Engineers
American Society for Engineering Education
Association for Women in Science
Omega Chi Epsilon Honor Society
Order of the Engineer
Phi Kappa Phi Honor Society
Sociedad de Ingenieros
Society of Women Engineers
Tau Beta Pi Engineering Honor Society

SYNERGISTIC ACTIVITIES

National Alliance for Broader Impacts (NABI) summit planning committee member, 2015.

National Academy of Sciences workshop participant, "Key Challenges in the Implementation of Convergence," 2013.

Organizer for NMSU Women in Engineering Conference, Fall 2010, Fall 2011.

Advisor (one of three) for the NMSU local section of the Society for Women in Engineering.

Mentored mid-career faculty through the NMSU ADVANCing Leaders program.

Mentored untenured female faculty in the NMSU College of Engineering through the NMSU-ADVANCE grant.

Mentored graduate students at Lehigh , Johns Hopkins, Iowa State and Harvard-MIT Division of Health Sciences and Technology through MentorNet.

NM BEST (Boosting Engineering, Science and Technology). Judged oral presentation portion of final game day.

“Girls Can”, DreamMakers and Pre-Engineering Program workshop presenter. Presented activity called “Fun With Slime” on generating and recycling polymers.

New Mexico Supercomputing Challenge. Provided feedback to teams during “meet the scientist day,” interim judging and the final judging of the computing projects undertaken by mid-school and high-school teams.

University faculty representative, with teachers from Lynn Middle school and Las Cruces High school to identify the skills a successful NMSU freshman engineering student should have. This project was sponsored by a Bridges for Engineering Education grant, PI: Ricardo Jacquez.

Participant in workshop to identify effective strategies to diversify STEM faculty, PIs: Mary O’Connell, Elba Serrano, Lisa Frehill.

Science Advisor for Science Interns, Tombaugh Elementary (2010-present).

COLLABORATORS

Shuguang Deng, Professor, Dept. of Chemical Engineering, New Mexico State University

Paul Andersen, Associate Professor, Dept. of Chemical Engineering, New Mexico State University

Jeanine Cook, Sandia National Laboratories

Paola Bandini, Associate Professor, Dept. of Civil and Geological Engineering, New Mexico State University

Mary Ballyk, Associate Professor, Dept. of Mathematical Sciences, New Mexico State University

Inna Pivkina, Associate Professor, Dept. of Computer Science, New Mexico State University

David Smith, Associate Professor, Dept. of Chemistry and Biochemistry, New Mexico State University

Geof Smith, Associate Professor, Dept. of Biology, New Mexico State University
Alon V. McCormick, CEMS, University of Minnesota-Minneapolis
Tina M. Nenoff, Sandia National Laboratories
Lisa Flores, Associate Professor, University of Missouri
Rachel Navarro, Associate Professor, University of North Dakota
Ricardo Jacquez, Professor, Chico State University
Sonya Cooper, Professor, New Mexico State University

ADVISEES

Graduate Students

Zufeyiya Yibulayin , Dept. of Chem. Eng., NMSU, M.S. 2012
Choudary Vellacheruvu, Dept. of Chem. Eng., NMSU, M.S. 2011
Bhargav Indurthi, Dept. of Chem. Eng., NMSU, M.S. 2010
Mahesh Naalla, Dept. of Chem. Eng., NMSU, M.S. 2008
V. K. K. Upadhyayula, Dept. of Chem. Eng., NMSU, M.S. 2005, Ph.D. 2007
Krista Adams, Dept. of Chem. Eng., NMSU, M.S. 2006
B. Ramanathan Palivenu, Dept. of Chem. Eng., NMSU, M.S. 2005
Marco Gallo, Dept. of Chem. Eng., NMSU, Ph.D. 2005
Siddarth Kittur, Dept. of Chem. Eng., NMSU, M.S. 2000
Albert Pickett, Dept. of Chem. Eng., NMSU, M.S. 1998
Danielle Sanchez, Dept. of Chem. Eng., NMSU, M.S. 2005

Undergraduate Students

Cessna Baca (2006-2008)
Joe Fronczek (2004-2005)
Brian Lusby (2005-2006)
Tim Jobe (2003-2005)
Rob Rakoff (2003-2004)
Kelly Fort (2002-2003)
Michael Brown (2002-2003)
Lance Williams (2000)
Kelly Nelson (2000-2002)
Christopher Weaver (through Bridges program Summer 2003)

High School Students

Project SEED

Nicole Zubiata (2000-2001)
Mikail Tadjikov (2002)

Explorer Program (Mayfield High School)

Danielle Doak (2004)

EXCEL Program

Laura Beeson (2008)
Dezaray Serna (2009)

UNIVERSITY OF MINNESOTA COURSES TAUGHT

ChEn 3001 Programming for Computational Methods (1995-1996)

NEW MEXICO STATE UNIVERSITY COURSES TAUGHT

ChE 100 Basic Chemical Engineering (2004-2008)
ChE 101 Stoichiometry/Mass Balances (2003)
CHME 102 Mass Balances (2016)
ChE 111 Introduction to Computer Calculations in Chemical Engineering
ChE 201/201 H Chemical Process Calculations (1996-2008)
ChE 301 Chemical Engineering Thermodynamics I (1998-2001, 2003-2011)
ChE 302 Chemical Engineering Thermodynamics II (2010-2011)
ChE 315L Process Instrumentation Laboratory (1997)
ChE 361 Engineering Materials (1998-1999)
ChE 412 Chemical Process Control (2001-2003, 2010)
ChE 490 Senior Seminar (co-taught, covered Ethics) (1999-2002)
ChE 490 Senior Seminar (2003, 2005-2008)
ChE 501 Intermediate Thermodynamics and Transport Properties (2006, 2015)

ChE 514 Intermediate Chemical Engineering Calculations (1997-2000)
ChE 598 Special Research Topics/Statistical Thermodynamics and Molecular Modeling (2003)

ChE 590 Graduate Seminar (2000-2003)
ChE 602 Statistical Thermodynamics (1997)
ChE 690 Graduate Seminar (2000-2003)

PROFESSIONAL SOCIETY ACTIVITIES

AICHE Education and Assessment Committee, (2015-present)
Engineering Research Council Board of Directors, American Society of Professional Engineers (2014-2015)
National Science Foundation, Division of Industrial Innovation and Partnerships (IIP) Committee of Visitors (2013 and 2016)
National Society of Professional Engineers, Professional Engineers in Higher Education Interest Group Executive Board, Southwestern Region Representative, (2012-2015)
New Mexico Society of Professional Engineers Board of Directors, Education Director (2012-2015)

ABET evaluator, Chemical Engineering Programs, (2010-present)
Committee Chair, AIChE Area 1a Planning Committee (2009-2010)
“Symposium in honor of H. Ted Davis,” co-organizer, Annual AIChE meeting (2008)
Programming Chair, Area 1a, Annual AIChE meeting (2008)
AIChE Area 1a Planning Committee (2006-2009)
ACS Unilever Award Committee (2004-2009)
Co-organizer, American Chemical Society Symposium, “Modeling and Simulation in
Colloid and Surface Science” September 2003
“Member-at-Large” American Chemical Society Division of Colloid and Surface
Chemistry (2001-2004)
Vice-Chair and Chair of Rio Grande Section of the American Institute of Chemical
Engineers (1998-1999)

UNIVERSITY COMMITTEES

Chair, ADVANCing Leaders Committee (2014-present)
Compliance Committee (2014-2015)
Intellectual Property Advisory Committee (2012-2015)
Building the Vision Strategic Planning Committee (2012)
New Mexico State Research and Economic Development Committee (2011)
Provost’s Budget Advisory Committee (2011, 2012)
Department Heads Academy Steering Committee (2010-2012)
Teaching Academy Advisory Board (2011-2014)
General Education Assessment Committee (1999-2002)
University Research Council (2003-2005)
Search Committee, Vice Provost for Research, (2003-2005)
Plan to Plan Taskforce, (2007)

COLLEGE COMMITTEES

Promotion and Tenure Committee (2015-present)
College of Engineering Space Committee, Chair (2013-2015)
Ad Hoc Committee to develop an Allocation of Effort document for the college (2008-
2010)
Ad Hoc Committee to revise the Student Evaluation instrument for the college (2009)
Search Committee, Associate Dean of Engineering (2005)
Engineering Research Council (2004-2005)
Chair, Development of Engineering White Paper, “Promoting Interdisciplinary
Collaboration” (2003)

DEPARTMENTAL COMMITTEES

Promotion and Tenure Committee, chair (2015-present)
Faculty Advisor, Omega Chi Epsilon (2002-2004)

Computer Committee, chair (1997-2004)
Scholarship Committee, chair (1999-2004)
New Student Advisor (2000-2009)
Graduate Studies Committee, Chair (2004-2005)
Graduate Student Organization Chapter Advisor (2000-2001)
Graduate Seminar Committee, chair (2000-2003)
Faculty Search Committee (Spring 1997, Spring 1999, Fall 1999)
Faculty Search Committee Chair (Spring 2003)
High School Relations Committee (1999-2004)
Laboratory and Safety Committee (1999-2004)
Library Liaison (2003-2004)
United Way team captain (1996)

COMMUNITY SERVICE

Judge, New Mexico Supercomputing Challenge, 1997-2001
Scientist, Adventures in Supercomputing 1997
Judge, Southwestern New Mexico Regional Science and Engineering Fair, 1998-1999, 2005-2008
Judge, ChemE Car Competition, AIChE Rocky Mountain Regional Conference 2001
ACE mentor, New Mexico State University, 1998-2000
MentorNet mentor, 2006-2009
American Chemical Society Scholars mentor, 2004-2008
Presenter, "Girls Can," 2001-2011
Presenter, "Dreammakers," 2005-2011
Presenter, "PREP", 2005-2011
New Mexico Best Hub committee, 2001
Judge, New Mexico BEST, 2005-2009
Faculty Advisor, NMSU Chapter of the Society of Women Engineers, 2005-present
Faculty Advisor for the Engineering Living Learning Community, 2007-2009
Faculty Advisor for the WISE Living Learning Community, 2006
Panel Facilitator, "Constructing the Future: Women Who Build," NMSU ADVANCE program, 2007
Panel Facilitator, "Best Practices in Research for STEM fields," 2011
Elder, First Presbyterian Church, Las Cruces, NM, 2010-2013
Science Advisor, Science Interns, Tombaugh Elementary, 2010-present
Advisory Board Member, Roadrunner Food Bank, Southern NM Branch, 2011-2015