



DR. CATHERINE T. AIMONE-MARTIN. President

EMPLOYMENT HISTORY

Industrial Experience

- 1999 – present President, Aimone-Martin Associates, LLC
Offices located in Socorro, NM, Kiehi, Maui, HI, Bayonne, NJ (City Seismic, LLC)
Blasting and vibration consulting, mining and geotechnical engineering www.aimonemartin.com
- 1977-1978 STS Consultants, Ltd., Northbrook, Illinois, Geotechnical Engineer
Construction site evaluation for foundation design and construction quality control
- 1976-1978 Golder Associates, Inc., Seattle, Washington, Geological Engineer
Mineral site assessment and feasibility analysis for U.S. and South American coal and uranium deposits
- 1974-1975 Anaconda Britannia Mines, Ltd., Britannia Beach, B.C., Canada, Geological Engineer
Ore quality control
- 1971-1972 Steep Rock Iron Mines, Ltd., Atikokan, Ontario, Canada, Geological Engineer
Ore grade control and monthly reserve updates

Consulting Experience

1979 - present

- Consultant to coal, quarry, and construction companies in the areas of blast design, fragmentation and back break control, vibration monitoring, control, and analysis
- Structure response to vibrations, vibration instrumentation, and specialty crack gauge structure monitoring
- Close-in construction vibration monitoring and control
- Permit applications and blasting impact plans
- Slope and mine highwall stability control, soil and rock mechanics, foundation design and problematic soils leading to defects in structures
- Forensics engineering, damage claims assessments, litigation support and expert testimony
- Community relations and corporate strategies involving mitigating blasting impacts on communities
- Ordinance development
- Training and education of blasters, consultants, DOT personnel and regulators in the rock blasting industry

Academic Experience

- June 2006 Emeritus Professor of Mineral Engineering, New Mexico Institute of Mining and Technology Socorro, NM
- 1981 - 2006 Professor of Mineral Engineering and Civil Engineering, New Mexico Institute of Mining and Technology Socorro, NM
- 2000 Sabbatical leave, Sandia National Labs, Waste Isolation Pilot Plant, Carlsbad, NM
- 2000 – 2006 Laboratory Consultants to Sandia National Laboratories in rock mechanical and repositories
- 1988-1998 Department Chair, Mineral and Environmental Engineering Department
- 1986 – 1997 Laboratory Affiliates to Los Alamos National Labs in explosives effects
- 1983-1985 Joint Appointment - Researcher, Center for Explosives Technology Research

EDUCATION

- 1981 Ph.D, Northwestern University, Civil Engineering
- 1971 B.Sc. Michigan Technological University Geological Engineering and Mining Engineering

PROFESSIONAL AFFILIATIONS

- National Stone, sand and Gravel Association – Services Member
- Society of Mining Engineering of the American Institute of Mining, Metallurgical and Petroleum Engineers
- International Society of Explosives Engineers: Board of Directors (1983-93), Seismograph and Vibration Standards Committee, Public Education Committee, Program Committee
- International Society for Rock Mechanics
- American Rock Mechanics Association (Life time member)
- American Society of Civil Engineers - Geo-Institute Rock Mechanics Committee
- International Association of Bomb Technicians and Investigators

APPOINTMENTS

National Stone, Sand & Gravel Association, Manufacturers & Services Division, Board of Directors, Member (2006 – present)

National Institute of Occupational Health and Safety (NIOSH) Mine Safety and Health Research Advisory Committee (2004 –2008)

New Mexico Mining Association, Board of Directors, Member (1998 – present)

National Academy of Sciences, National Research Council, U.S. National Committee for Rock Mechanics (1995-2002)

AWARDS

1996 Distinguished Alumni of Geological Engineering, Michigan Technological University

2002 ISEE Chapter Leadership award

Recent Structure Response Studies

- **O&G Industries, Inc., Torrington, CT (1983 – present)**

Annual analysis of blasting program for two quarry operations; evaluation of blasting and vibration records and the preparation of annual blasting impact report for permit application; modifications to blast designs to control off-site vibration and airblast impacts; public relations; special vibration studies conducted when necessary

1983-1985: Strain measured in 5 structures during blasting and normal household activities

2000-2002: Structure response studies at seven dwellings around two quarries, instrumented for whole structure and mid-wall response; existing crack response to blasting, environmental changes and normal household activities

- **Office of Surface Mining, Pittsburgh, PA (1999-2002)**

Comparative Study of Structure Response to Coal Mine Blasting Non-Traditional Residential Structures:

Instrumented 25 structures in 11 states to measure whole structure and mid-wall responses to blasting and other natural excitations and climate conditions including wall crack response studies

Comparative Study of Domestic Well Integrity to Coal Mine Blasting: continuously instrumented 9 wells during blasting operations for changes in water quality and quantity in response to vibrations at the surface and at depth.

- **City of Henderson, NV (2005 – present)**

Consultant to the City to conduct structure response studies, develop City Blasting Ordinance and review blasting permits

2005: Instrumentation of 2 structures to measure structure and crack responses to blasting, normal household activities, wind gusts and changes in environmental conditions

2005: Attenuation study of construction and temporary quarry blasting within different neighborhoods to study effect of terrain and geology on ground motions and airblast characteristics waveforms

- **Sibley Quarry, Detroit MI (2005 – present)**

Instrumentation of 2 structures to measure structure and crack responses to quarry blasting, normal household activities, and changes in environmental conditions

- **Florida Rock Industries, Inc, Richmond, VA (2005 – present)**

Instrumentation of 2 structures at the Tidewater Quarry to measure structure and crack responses to quarry blasting, normal household activities, and changes in environmental conditions

- **Aspect Energy, Inc. Southwest Louisiana operations (2005)**

Structure response studies for 2 structures adjacent to oil and gas exploration in the city of Jennings, LA using explosives seismic shooting and vibro-seis vehicles

- **Salls Brothers Construction, Inc. (2002 – present)**

Blasting vibration monitoring, pre-blast surveys of structures, public relations

2004: Instrumentation of a structure to measure structure and crack responses to construction blasting, normal household activities, and changes in environmental conditions

- **United Defense/U.S. Army, Dugway Proving Ground, Salt Lake City, UT (2003)**

Structure response of an historic German structure in response to airblast for a new gun range for environmental assessment permitting

- **LaFarge Southwest, NM (2003 – 2005)**

Oversight to quarry blasting, vibration control and analysis, structure response studies and public relations

2003: Instrumentation of a structure to measure structure and crack responses to construction blasting, normal household activities, and changes in environmental conditions

- **Sierra Blanca Constructors, Hondo, NM (Granite Construction and URS) 2003 - 2005**

Vibration consultant to a \$190 M project to reconstruct 40 miles of US 70 through historic communities and scenic byways. to improve safety of travel; vibration monitoring for rock blasting and equipment, public relations, damage claims assessment and pre-construction structure surveys for over 400 structures.

2003: Instrumentation of an historic structure to measure structure and crack responses to construction blasting,

normal household activities, and changes in environmental conditions

- **Sibley Quarry (Detroit, MI) 2006**
Structure response study to quarry blasting for two structures and attenuation study of vibration propagation
- **Vulcan Materials Company (Pineville Quarry, Charlotte, NC) 2007**
Structure response study to quarry blasting; complete soils (expansive clay) analysis as soils affect residential structure foundation performance
- **EMRTC, New Mexico Tech, 2007**
Structure response and cracking potential from ordinance airblast effects from daily multiple open-air experimental detonations
- **Goodfellow Brothers, Inc. 2005-2006**
Instrumentation of structure adjacent to two construction blast site in Maui, Hawaii to measure blast effects and cracking potential as a public relations project

Other related projects

ASI RCC, Inc., Albuquerque, NM, 2005

Vibration monitoring for sheet pile driving for a diversion dam and intake structure in the Rio Grande River main channel

Industrial Alchemy, Inc./National Science Foundation SBIR grant (subcontractor to a \$2.5 M) , 2003-2006

Assessing and controlling NOx formation during surface coal mine cast blasting; fragmentation and backbreak control, highwall vibration monitoring, pressure and VOD measurements, explosive quality testing

Pittsburgh & Midway Coal Mining Co., 2005-2006

Blast optimization and analyses for coal casting operations (slope stability control, fragmentation, backbreak and highwall vibration control)

AUI, Inc (Albuquerque Underground), 2004-present

Burned Area Reconstruction and Utilities Upgrade Project, Los Alamos County No. 2003-31

Vibration monitoring and pre-construction structure surveys during construction to rebuild community infrastructure and roads to a condition equal or superior to the pre-Cerro Grande fire conditions.

Hansen, Ohio, 2003

Assessments of blast damage claims, site vibration analysis, and support for blaster training for a quarry

Kleinfelder, Las Vegas, NV, 2003

Assessment of vibrations from construction equipment and development of safe vibration standards

U.S. Bureau of Reclamation, 2002 – present

Blasting consultant to quarry blasting projects along the Rio Grande River corridor for the production of rip rap

Phelps Dodge Corporation - Chino Mines Co., Silver City, NM, 1998 – 2004

Blasting design and vibration monitoring of hardrock open pit mine highwalls and cultural features;
Conducted numerous studies and oversee on-going controlled blasting and analysis of vibrations

BHP Billiton, Farmington, NM, 1997 – 2004

Blasting design and vibration monitoring of residential and mine-owned structures for three coal strip mines; Public relations

St Cloud Mining Company, Truth or Consequences, NM, 2000 – 2003

Vibration Monitoring of dwelling and engineered structures for close-in utility line, rip rap blasting projects for the Bureau of Reclamation

Vulcan Materials Co., Birmingham, AL, 2003 – present

On-going quarry blasting consultant: damage claims investigations and special vibration studies

Edgewood Aggregates, LLC, Edgewood, NM, 2005 – present

Quarry blast vibration and design consultant, public relations

CH2MHILL, Sacramento, CA, 2007 – present

Comparison of different excavation methods for construction blasting adjacent to a historic highway tunnel; vibration analysis of different mechanical excavator compared with HE and non-HE explosives

Kiewit Pacific, Kauai, HI 2006 – present

Vibration monitoring and blast design oversight of a large construction development adjacent to Hawaiian archeological sites and endangered species

Goodfellow Brothers, Inc., Maui, Hawai'i, and Kauai, HI 2006 – present

Full-time vibration and blasting consultants include blast design oversight, drill and blast optimization program for construction blasting. Full-time vibration monitoring and control public relations and geotechnical engineering

Alcohol Tobacco, Firearms and Explosives (ATF) Fort AP Hill, VA, 2007- present

Instructor to ATF criminal investigators on close-in open-air blast effects on structures

Office of Surface Mining, Denver, CO, 2007-present

Seismograph coupling study for surface coal mine blasting

Goodfellow Brothers, Inc. Maui, HI, 2006-present

Full-time consultant on community relations, blast design oversight, seismic vibrations analysis and claims

assessments; blasting and vibration mentoring plans, construction vibrations during rock excavation and pile driving

Kukui'ula Development., LLC Kauai, HI, 2007-present

Full-time consultant for numerous blasting projects: blast design oversight, seismic vibrations analysis and claims assessments

Komokoa Development, Isemoto Constructors, Hawaii 2008-present

Full-time consultant for numerous blasting projects: blast design oversight, seismic vibrations analysis and claims assessments

PRESENTATIONS AND PUBLICATIONS

1. Co-Author, "Social, Economic, and Legal Consequences of Blasting in Strip Mines and Quarries", Contract No. J0285036, prepared for the U.S. Bureau of Mines, Northwestern University, May 1981.
2. Aimone, C.T., "DRBLST - A Computer Cost Model for Surface Coal Mine Fragmentation". Proceedings, 17th International Symposium on Computer Applications in the Mineral Industry, Golden, Colorado, April 1982.
3. Aimone, C.T., "Fragmentation Measurement Results for Fourteen Full-Scale Production Blasts: A Comparison with Three Dimensional Wave Code", Proceedings, 9th Conference on Explosives and Blasting Techniques, Dallas, 1983.
4. Meyers, M.A. and Aimone, C.T., "Dynamic Fracture by Spalling in Metals", Annual meeting of T.M.S. of A.I.M.E., Atlanta, 1983.
5. Meyers, M.A. and Aimone, C.T., "Dynamic Fracture (Spalling) of Metals", Progress in Materials Science (monograph), Vol. 28, Pergamon Press, Ltd., 1983.
6. Aimone, C.T., Meyers, M.A., and Mojtabai, N., "Shock Wave Induced Fragmentation of Copper Porphyries", Proceedings, 25th U. S. National Symposium on Rock Mechanics, Northwestern University, 1984.
7. Aimone, C.T., "Near Borehole Fracture and Fragmentation Studies in Copper Porphyries", Proceedings, 11th Conference on Explosives and Blasting Techniques, San Diego, 1985.
8. Dowding, C.H. and Aimone, C.T., "Wave Propagation Model for Rock Fragmentation", Rock Mechanics and Rock Engineering, Vol. 18, No. 1, 1985.
9. Aimone, C.T., "Blast Design for Particle Sizing and Costs From Crater Tests in the Santa Rosa Tar Sands", presented at the Fall Meeting of S.M.E., Albuquerque, 1985.
10. Dahlstrand, T.K., Buccille, W.A. and Aimone, C.T., "Blasting and Vibration Study of the O & G Industries, Inc., Quarry Operations, Woodbury, Connecticut. STS D'Appolonia Ltd., 1985
11. Edwards, C.L., Dick, D.D., Weaver, T.A., and Aimone, C.T., "Small-Scale Cratering Experiments". Report LA-UR 86-1280, Los Alamos National Laboratory, 1986.
12. Aimone, C.T., et. al., "Small-Scale Crater Tests in Weak Concrete and Sand", Proceedings, 12th Conference on Explosives and Blasting Techniques, Atlanta, 1986.
13. Aimone, C., Yoshita, M., Tirumurti, C., Program MIXTURE - a One-Dimensional Hydrodynamic Code for Porous Rock", Report, Center for Explosives Technology Research, NMIMT, 1986.
14. Aimone, C.T. and Dahlstrand, T.K., "A Study of Blasting Vibrations and Structural Response to Surrounding Dwellings at Traprock Quarry". Proceedings, 2nd International Symposium on Rock Fragmentation by Blasting, Keystone, 1987.
15. Brown, J.A., Blacic, J. D., Aimone, C. T., Fugelson, L. E., Dick, D.D., and Kranz, R. L., "Stress Wave Propagation and Attenuation in Berea Sandstone at High Strain Levels", Los Alamos National Labs, for Ballistic Missile Office, January 1988.
16. Money, W., Aimone, C., Benze, J., and Touryan, K., "Focused Shock Drilling Exploratory Research Program", Final Report, Department of Energy, DOE/ER/13330-2, August 1988.
17. Money, W., Benze, J., and Aimone, C., "Electrohydraulic Rock Fracturing by Pulsed Power Generated Focused Shocks", 7th IEEE Pulsed Power Conference, Palo Alto, June 1989.
18. Aimone, C.T., The Use of Explosives in Safe Blasting Practices: Transportation, Storage and Handling", Short Course for the New Mexico Rural Electric Cooperative Association, New Mexico Tech, July 1989.
19. Touryan, K., Touryan, L., Benze, J., and Aimone, C., "An Innovative Use of Pulsed Power Technology for Liberating Minerals From Ores", Phase I Final Report for NSF, Tetra Corp., Albuquerque, 1990.
20. Brown, J.A., Blacic, J.D., Aimone, C.T., and Dick, R.D., "Stress Wave Propagation and Attenuation in Sandstone at High Strain Levels", Geophysical Monograph 56, American Geophysical Union, 1990, pp. 149 - 171.
21. Aimone, C. and Rhodes, V., "Preparing for Blast Damage Cases When Foundation Soils are a Factor", Proceedings, 17th Conference on Explosives and Blasting Techniques, Society of Explosives Engineers, Las Vegas, 1991.
22. Aimone, C.T. and Mojtabai, N., "Electronic Detonators", IEEE Potentials, April 1991.
23. Ross, G. and Aimone, C.T., "Solid Waste Collection and Disposal Study for Lincoln County, Phase I: Economic Assessment of Alternatives", Project Report, 1991.
24. Ross, G. and Aimone, C.T., "Solid Waste Collection and Disposal Study for Lincoln County, Phase II: Evaluation of Potential Landfill Sites", Final Project Report, 1991.

25. Aimone, C. T.. "Overview of Blast Damage Litigation", Application and Use of Explosives in the Mineral Industry", Short Course, 97th Annual Convention, Northwest Mining Association, December, 1991.
26. C. Aimone-Martin, K. Oravec, E. Dussell, "Summary Report on TDR Calibration for In-situ Rock Mass Deformation Measurements at the WIPP Site", Technical Report to WERC.
27. K.M. Chua, C. Aimone-Martin, and N. Mojtabai, "Performance of Rock Reinforcement Systems at Elevated Temperatures", Technical Report to WERC, for publication consideration, 1992.
28. K.M. Chua, C. Aimone-Martin, N. Mojtabai, "A Numerical Study of the Effectiveness of Mechanical Rock Bolts in an Underground Opening Excavated by Blasting", 33rd U.S. Symposium on Rock Mechanics, Santa Fe, June 1992.
29. Edwards, C.L., Aimone, C.T., Pearson, C. and Baker, D.F., "Effects of Structural Setting and Rock Properties on Amplitudes of Surface Motions in the Vicinity of Small Explosive Tests", Proceedings, 10th Symposium on Explosives and Blasting Research, Society of Explosives Engineers, Austin, February 1994.
30. Aimone, C.T., Oravec, K.I., "Time Domain Reflectometry Calibration for the Waste Isolation Pilot Project", presented at the Society of Mining Engineers, Annual meeting, Albuquerque, February 1994.
31. Aimone, C.T., Oravec, K.I. and Nytra, T., "TDR Calibration for Quantifying Rock Mass Deformation at the WIPP Site, Carlsbad, NM", Technical Completion Report, Project No. WERC-01-23171, August 1994.
32. Chua, K.M., Xu, L, Aimone, Cathy, and Ghweir, M., "Strength and Fracture Toughness of the Yucca Mountain Tuff at Elevated Temperatures", Technical Completion Report, WERC, September 1994.
33. Aimone, C.T., Oravec, K.I., "TDR Calibration for Quantifying Rock Mass Deformations at the Waste Isolation Pilot Project (WIPP) Site, Carlsbad, New Mexico", Symposium and Workshop on Time Domain Reflectometry in Environmental, Infrastructure, and Mining Applications, U.S. Bureau of Mines Special Publication SP 19-94, Evanston, IL, September 1994, pp 507-517.
34. Bhada, R.K., Aimone-Martin, C.T., Duran, A, Kuhns, D.J., Lewis, C.R., Navratil, J.D., Rostami, J., Smith, D.M., and Wahi, K.K., Independent Peer Review of the U.S. Department of Energy Waste Isolation Pilot Plant Engineered Alternatives Cost/Benefits Study Final Report, for the Nuclear Regulatory Commission and DOE Carlsbad Office, 1996.
35. Aimone-Martin, C.T. and S. Beattie, "Effect of Structural Setting on Blast-Induced Velocities and Amplitude of Ground Motions in Perlite", *Proceedings*, 12th Symposium on Explosives and Blasting Research, Society of Explosives Engineers, Orlando, February 1996.
36. Aimone-Martin, C.T., Oravec, K. I., Nytra, T.K., "A Mechanical Device for the Measurement of Combined Shear and Tension in Rocks", *International Journal of Rock Mechanics and Mining Sciences*, Vol. 34, No. 1, 1997, pp. 147-151.
37. Aimone-Martin, C.T., and M. Ness, 1997, "Effects of Small Scale Geologic Structures on Azimuthal Velocities and Amplitudes", 36th U.S. Rock Mechanics Symposium, Columbia University, New York.
38. Aimone-Martin, C. T., and Francke, J. L., 1997, "Time Domain Reflectometry (TDR): A Comparison of Field Data to Laboratory Shear Tests", 36th U.S. Rock Mechanics Symposium, Columbia University, New York, June; printed in the *International Journal of Rock Mechanics and Mining Sciences*, Vol. 34, Nos. 3/4.
39. Aimone-Martin, C. T., "Construction Vibration Standards for the City of Albuquerque", final report, submitted to the Environmental Health Department, Consumer Protection Division, City of Albuquerque, 1997.
40. Aimone-Martin, C.T., Oravec, K.I., and Bowser, J., "Results of Point Load Tests to Determine the Effects of Clay and Other Insolubles on Point Load Strength", report to Westinghouse WID, Carlsbad, NM, 1997.
41. Aimone-Martin, C. T., Dick, R. D., Weaver, T. A., Edwards, C. L., Small-Scale Cratering Experiments I: Concrete. *FRAGBLAST, International Journal for Blasting and Fragmentation*, Vol. 2., 1998, pp. 143-180.
42. Dick, R. D., Aimone-Martin, C. T., Weaver, T. A., Edwards, C. L., Small-Scale Cratering Experiments II: Sand. *FRAGBLAST, International Journal for Blasting and Fragmentation*, Vol.2., 1998, pp. 269-294.
43. O'Neil, T.J., Ahrens, T.J., Aimone-Martin, C.T., Blandford, R.R., Gardner, B.M., Karmis, M.E., Leith, W.S., Rendu, M-J., Wiegand, J., and Zavodni, Z.M., "Seismic Signals from Mining Operations and the Comprehensive Test Band Treaty", prepared by the Committee on Seismic Signals from Mining Activities, National Academy of Science, National Research Council for the Department of Energy, 1998.
44. Aimone-Martin, C.T. and Oravec, K.I., "Deformation and Fracture Characteristics in Rock Salt From Diametral Compression Tests", report to Westinghouse WID, Carlsbad, NM, 1999.
45. Aimone-Martin, C. T., Chua, K. M., and Ghwier, M., Strength of Yucca Mountain Tuff at Elevated Temperatures, accepted for publication in *Rock Mechanics and Rock Engineering*; writing final version with the addition of further data collected since submission
46. Aimone-Martin, C.T., and Martin, R.S., "Effects of Temperature and Humidity on Airblast Sound Pressure Levels", *Journal of Explosives Engineering*, March-April, 2000
47. Aimone-Martin, C. T., Pease, B. L., and Wheat, M., "Vibration Control And Seismic Analysis of The Kneeling Nun Rock Pinnacle Adjacent to The Santa Rita Pit, New Mexico", 26th Symposium on Explosives and Blasting Techniques, Anaheim, February 2000, pp. 13-22. **Keynote Talk.**
48. Aimone-Martin, C. T., Faroni, K., and Gelormino, T., "Fifteen Years of Blast Vibration Control and Improved Public Relations for Two Traprock Quarries", 26th Symposium on Explosives and Blasting

Techniques, Anaheim, February 2000, pp. 187-196..

49. Aimone-Martin, C.T. and Martell, M.A., 2000, "Salinity Gradient Solar Pond Technology Applied to Potash Solution Mining", in *Environmental Improvements in Mineral Processing and Extractive Metallurgy*, M. A. Sánchez, F. Vergara and S. H. Castro, Eds., University of Concepción, presented at V International Conference On Clean Technologies For The Mining Industry, May 9-13, 2000, Santiago, Chile during EXPOMIN '2000.
50. Aimone-Martin, C. T. and Martell, M.A., 2002, "Response of Non-traditional Structures to Coal Mine Blasting", 28th Symposium on Explosives and Blasting Techniques, Las Vegas, February 2002.
51. Daniel B. Stephens & Associates, Inc. and Aimone-Martin Associates, LLC, 2002, "Comparative Study of Domestic Water Well Integrity to Coal Mine Blasting – Summary Report", prepared for the Office of Surface Mining Reclamation and Enforcement, Pittsburgh.
52. Aimone-Martin, C. T and E. J. Clah, "Response Of A High-Pressure Natural Gas Pipeline To Coal Mine Blasts", 29th Symposium on Explosives and Blasting Techniques, Nashville, February 2003.
53. Aimone-Martin, C.T., M.A. Martell, L.M. McKenna, D.E. Siskind, and C.H. Dowding, 2003, "Comparative Study of Structure Response to Coal Mine Blasting", prepared for the Office of Surface Mining Reclamation and Enforcement, Pittsburgh.
54. Dowding, C.H., C. T. Aimone-Martin, and Schneider, M. L., 2004, Effect of Blast Design on Crack Response, 2nd World Conference on Explosives and Blasting, European Federation of Explosives Engineers (EFEE), Prague.
55. Aimone-Martin, C. and Achuff, F., "Design/Build Highway Blasting - Case Study", presented at the International Society of Explosives Engineers Annual Conference and Research Symposium, New Orleans, February 2004.
56. Aimone-Martin, C., Loukides, C., "OSM Blaster Training Modules For Western Coal Mines and Quarries", presented at the International Society of Explosives Engineers Annual Conference and Research Symposium, New Orleans, February 2004.
57. Aimone-Martin, C, Dowding, C., "Blast- Induced Structural and Crack Response of a Brick Residential Structure Near An Aggregate Quarry", International Society of Explosives Engineers Annual Conference and Research Symposium, Orlando, February 2005.
58. Achuff, F. and Aimone-Martin, C., 2005, "Highway Blasting Design/Build Case Study", *The Journal of Explosives Engineering*,. Vol. 22, No. 1, Jan.-Feb., pp. 10 – 19.
59. Aimone-Martin, C, 2007, "Development of an Urban Blasting Ordinance for the City of Henderson, NV", to be presented at the International Society of Explosives Engineers Annual Conference and Research Symposium, Nashville, January 2007.
60. Dowding, C.H., and Aimone-Martin, C, "Blast Vibration and Wind Gust Response of Residential Structures", submitted to GeoDenver conference Feb 18-21, 2007, ASCE Geo Institute
61. Dowding, C.H., Aimone-Martin. C.T., and J. Meissner, "Crack Response to Blast Vibrations and Moisture Induced Volumetric Changes in Foundation Soils", to be presented at the International Society of Explosives Engineers Annual Conference and Research Symposium, Denver, February 2008
62. Aimone-Martin. C.T., "Comparative Measurement of Structure and Crack Motions during Blasting and Other Environmental Forces", to be presented at Fragblast 9, Granada, Spain, September, 2009.

BOOKS

1. SME Mining Engineering Handbook, 1992, 2nd Edition, Chapter 9.2.1 Blast Design, pp. 722-746.

CONFERENCES, SHORT COURSES, AND TRAINING SEMINARS

1. "Rock Blasting Techniques and Practices", Short Course presented November 1984, New Mexico Tech, Socorro, NM, with L.L. Oriad.
2. "Blasting Techniques and Practices Applied to Highway Construction and Maintenance", Seminar for the New Mexico State Highway Department, May 1987.
3. "The Use of Explosives in Safe Blasting Practices: Transportation, Storage and Handling", Short Course for the New Mexico Rural Electric Cooperative Association, New Mexico Tech, July 1989.
4. Sponsor/Organizer, "Mining Issues Forum", Santa Fe County, Santa Fe, November 17, 1990.
5. Co-sponsor/organizer, "Mine Reclamation in the West", sponsored with N.M. Energy, Minerals and Natural Resources Department, November 14-15, 1991, Albuquerque, N.M.
6. "Overview of Blast Damage Litigation", Application and Use of Explosives in the Mineral Industry, Short Course (presenter and co-director of course), 97th Annual Convention, Northwest Mining Association, December, 1991.
7. "Mining Law and Technology Conference", Socorro, New Mexico, September 4-6, 1997, sponsored with the N.M. State Bar Association and the N.M. Energy, Minerals and Natural Resources Department.
8. Co-organizer and invited speaker, 1998, New Directions for U.S. Rock Mechanics, organized session on "Catastrophic Rock Failure", a forum sponsored by the American Rock Mechanics Association and funded by NSF, Asilomar, CA; report finding published in the *International Journal of Rock Mechanics and Mining Sciences & Geomechanics Abstracts* (in preparation).
9. "The Effects of Poor Soil Conditions on Structures", invited speaker, 2nd Annual Blasting Vibration Technology

- Conference, sponsored by Vibra-Tech and Geosonics, Key West, FL, February 1998.
- 10., "Rock Blasting", invited short course lecturer, presented at the North American Rock Mechanics Symposium, Cancun, Mexico, June 1998
 11. "Vibrating Your Rocks", invited speaker at "Best in the West Drilling and Blasting Conference", Sheridan, WY, sponsored by the Great Plains Chapter of ISEE, April 2000.
 12. "Evaluating Blast Damage Cases When Soil Conditions are a Factor", Invited Seminar for the Bluegrass Chapter of ISEE, Louisville, KY, June 23, 2000.
 13. "Rock Blasting and Vibration Control", 2-day short course at the Crazy Horse Monument, Rapid City, SD, September 22-23, 2000.
 14. "Structure Response to Surface Coal Mine Blasting", invited speaker at "Best in the West Drilling and Blasting Conference", Spearfish, WY, sponsored by the Great Plains Chapter of ISEE, April 2001.
 15. "Response of Non-Traditional Structures to Coal Mine Blasting", invited speaker at ISEE Regulators Conference, Pittsburgh, PA, July 22-24, 2001.
 16. "Rock Blasting and Vibration Control", "Public Relations in Blasting practices" 2-day short course at the Crazy Horse Monument, Rapid City, SD, September 13-14, 2001.
 17. Co-organizer and speaker, "Vibration Control and Public Relations", Drilling and Blasting Seminar, Nation Stone, Sand and Gravel Association, Cincinnati, OH, Oct. 17-20, 2001
 18. Organizer and speaker, "Blasters Training and Certification", 3 day course, Farmington, NM, March 2002.
 19. Organizer and speaker, "Managing Blasting Contract Operations", for the U.S. Bureau of Reclamation, Albuquerque, NM, March 2002, with Jerry Wallace.
 20. "Control of Vibrations when Blasting Adjacent to High Pressure Gas Pipelines", invited speaker at "Best in the West Drilling and Blasting Conference", Spearfish, SD, sponsored by the Great Plains Chapter of ISEE, April 2003.
 21. "Vibration Measurement and Control in Blasting", Blasters' Training Seminar, Crazy Horse, SD, September 2003.
 22. "Vibration and Airblast Control: Structure Response", Western Mine Blasting Safety and Application Seminar, Salt Lake City, September 2003.
 23. Organizer and speaker, Blasters Training Seminar for the State of New Mexico, Farming, March 17-19, 2004.
 24. "Blasting Vibrations, Regulating Blasting Vibrations and Response to Blasting Complaints", Mississippi Valley Chapter of ISEE, St. Louis, April 6, 2004.
 25. "Fragmentation and Back Break Control Using Timing for Large Cast Blasting Coal Mining", Best in the West, Sheridan. April 21-24, 2004
 26. Invited speaker, "Blasting Controls on Vibrations and Airblast", Western Mine Blasting Safety and Application Seminar, Salt Lake City, September 2004
 27. "Design Effects on Vibrations and Airblast", 31st. Annual Kentucky Blasting Conference, Louisville, December 2004.
 28. Invited speaker, "Blasting Vibrations, Airblast and Structure Response", Mining Blasting Safety and Applications Seminar, MSHA, Denver, August 2005
 29. Organizer, Vibration Workshop session at the 31st Explosives and Blasting Techniques Conference, addressing International Blasting Vibrations Regulations and close-in Blasting Techniques, , Orlando, February 2005
 30. Invited speaker to Blaster's Training Seminar, "Structure Response to Blasting", 31st Explosives and Blasting Techniques Conference, Orlando, February 2005.
 31. Invited speaker to Best in the West, "Coal Casting Study: Correlation of back Break, Fragmentation and Vibrations at the Peabody Antelope Rochelle Mine, 1, Casper, WY, April 29-2, 2005.
 32. Invited speaker, "Structure Response to Blasting", Western Mine Blasting Safety and Application Seminar, Denver, September 2005.
 33. Invited organizer and speaker, NSSGA Drilling and Blasting Seminar, "Blasting Vibrations and Public Relations" session, Hershey, PA, October, 2005
 34. "Blasting Vibrations, Airblast and Structure Response", 20th Mine Blasting Safety and Applications Seminary, MSHA Academy, Beckley WV, January 2006
 35. Invited organizer and speaker, session: "Good Vibrations? Working With Your Community and Minimizing Blasting Impacts From Your Site , 2006 annual convention, Tampa, March 2006
 36. Invited speaker, "Structure Response and Pubic Perception", Mining Blasting Safety and Applications Seminar, MSHA, Denver, August 2006
 37. Organizer and speaker, Rock Blasting in Urban Environments – Best Public Relations Practices, Waikiki Sheridan, Honolulu, October 18, 2006.
 38. Invited speaker to the Mid-American ISEE chapter conference: "Public Relations Tools for Quarry and Construction Blasting Operations", Lake Ozarks, MO, November, 2006.
 39. Invited speaker to Kentucky Blasting Conference: Structure Response Studies used as a Public Relations Tool, Lexington, KY, December 2006.
 40. "Public Relations Tools for the Blaster", 21th Mine Blasting Safety and Applications Seminary, MSHA Academy, Beckley WV, January 2007
 41. Invited speaker to the Ohio Drilling & Blasting Conference, "The Real Causes of Cracking in Homes", Columbus, OH, March 2007

42. Invited speaker, West Virginia Blasters Training, Charleston, WV, two presentations: "The Real Causes of Cracking in Residential Structures, and "Blast Design Effects on Vibration and Airblast Highwall Stability and Fragmentation", April 2007
43. Organizer and presenter, "Rock Blasting in Urban Environments", presented to the Arizona Fire Marshals, Prescott, AZ, April 2007
44. Invited speaker, "Vibration Control and Community Relations", Best in the West, April 2007, Spearfish, SD.
45. Panel organizer and presenter, Blasting and Community Relations, "Community Relations and Quarry Blasting Operations", Drilling and Blasting Safety Seminar. NSSGA, Dulles, September 2007.
46. Speaker, Blasting Vibrations, airblast and Structure Response, Drilling and Blasting Safety Seminar. NSSGA, Dulles, September 2007.
47. Instructor, ATF training for Explosives Investigators and Special Agents, Fort AP Hill, Virginia, Session in June, July, May, June, August and September 2007.
48. Organizer, Crazy Horse training: 2007 Paul Muehl Blasting Training Seminar, "Blast Vibration Monitoring, Analysis and Control", four presentations on the History of Blasting Regulations, Calculations for Scaled Distance, 48. Structure Response to Blasting and other Influences, and Vibration and Airblast Prediction, September 2007
49. Invited Keynote Speaker "Advanced Techniques to Mitigate Blasting Vibration with Community Relations in Mind" and "Documenting Structure Response to Blasting", 13th Pennsylvania Drilling and Blasting Conference, State College, PA, November 2007.
50. Invited speaker, "Structure Response Studies and Other Public Relations Tools, Kentucky Blasters Conference, Lexington, KY, December 2007
51. "Structure Response to Airblast and Ground Vibrations", 22nd Mine Blasting Safety and Applications Seminary, MSHA Academy, Beckley WV, January 2008
52. Instructor, ATF training for Explosives Investigators and Special Agents, Fort AP Hill, Virginia, February 2008.
53. Invited speaker, "Vibration Control and Community Relations", Best in the West, Gillette, WY, April 2008.
54. Organizer and presenter with Gordon McKeen, "Evaluating and Managing Construction Vibration Risks", Albuquerque, June 2008
55. Trainer, Kentucky Department of Explosives and West Virginia Department of Environmental Protection, Office of Explosives and Blasting, "The Science in Support of Safe Blasting Criteria and Public Perception", for State Investigators, 2 seminars, July 2008