Kurt W. Katzenstein, Ph. D., P.E.

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Current Position: Associate Professor, Geological Engineering; South Dakota School of Mines and Technology

Education:

Ph. D., Geo-Engineering, University of Nevada, Reno 2008

Concentrations: Interferometric Synthetic Aperture Radar (InSAR), Rock Mechanics, Bedrock Aquifer Compaction

Dissertation: Mechanics of InSAR-Identified Bedrock Compaction and Subsidence Associated with Mine-Dewatering in North-Central Nevada

M.S. Geological Engineering, University of Nevada, Reno, 2004

Concentrations: Slope Stability, Volcanic Hazards

Thesis: Limit Equilibrium Analysis of the May 18, 1980 Rockslide-Avalanche at Mount Saint Helens, Washington, Utilizing Geotechnical Strength Data

B.S. Geological Engineering, University of Nevada, Reno, 2001 (ABET Accredited)

Experience:

Academia:

2017 – present:	Associate Professor, South Dakota School of Mines and Technology
2011 – 2017:	Assistant Professor, South Dakota School of Mines and Technology (tenure- track)
2008 – 2011:	Assistant Professor, South Dakota School of Mines and Technology (non-tenure-track)
Courses Taught at SD Mines:	Introduction to Geological and Mining Engineering (GEOL/MEM 110) Earth Systems Engineering Analysis (GEOE 211) Geology for Engineers (GEOE 221) Mineralogy and Petrology for Mining Engineers (GEOL 314) Stratigraphy and Sedimentation (GEOL 331) Engineering Geophysics I (GEOE 324) Regional Field Geology (GEOL 403/503) Geological Engineering Field Camp (GEOE 410) Introduction to Remote Sensing (GEOL 420) Environmental and Engineering Geology (GEOE 466/566) Introduction to Geomechanics (GEOE 467/567) Geohazards (GEOE 468/568) Interferometric Synthetic Aperture Radar Interferometry (GEOE 711)
Fall 2006:	LOA Instructor, University of Nevada, Reno

Courses Taught: Geological Engineering: Slope Stability (GE 483/683); Introduction to Geological Engineering (GE 106)

2001 – 2005: Teaching Assistant, University of Nevada, Reno
Labs Taught: Earthquakes, Volcanoes, and Natural Disasters Laboratory (Geol 100); Physical Geology Laboratory (Geol 103); Geological Engineering: Slope Stability Laboratory (GE 483/683)

2005 - 2006 Research Assistant, University of Nevada, Reno, Nevada Bureau of Mines and Geology
Supervisor: John W. Bell
Research Subjects: Interferometric Synthetic Aperture Radar (2005-2006)

2002 Research Assistant, University of Nevada, Reno
Supervisor: Dr. Robert J. Watters
Research Subjects: Volcanic edifice instability

Professional:

2022- present ABET EAC Commissioner for Geological Engineering

2022 – present ABET Team Chair (TC)

2018 – 2022: ABET EAC Alternate Commissioner for Geological Engineering

2016 – present: ABET Program Evaluator (PEV) for Geological Engineering

2015 – present: Licensed Professional Engineer (NV – Geological Engineering)

2006 – present: Performed InSAR related consulting work/research to delineate surface response to several high-volume pumping areas in the arid western U.S.

2003 – 2008: Geological Engineering Consultant: Performed unique strength testing and analysis on soil and rock for private geotechnical firms. University of Nevada, Reno (Supervisor: Dr. Robert J. Watters) 2003 – 2008

2000 – 2003 Staff Geological Engineer: Black Eagle Consulting, Reno, NV

Research

Interferometric Synthetic Aperture Radar (InSAR):
I oversee an InSAR laboratory at the South Dakota School of Mines and Technology that utilizes the Repeat Orbit Interferometery Package (ROI_Pac), and the European Space Agency's Sentinel Application Platform (SNAP) Sentinel 1-Toolbox software packages to process radar data to investigation ground surface deformation. The establishment of this lab was funded by a Nasa Project Initiation Grant (PIG) as well as a Nelson Research grant (SD Mines).

Research Topics: Quantification of surface deformation resulting from both natural and anthropogenic phenomena including mine dewatering, municipal groundwater use, tectonic

stresses, volcanic phenomena, etc. Previous and ongoing studies have evaluated deformation in the Black Hills Region, the Powder River and San Juan Basins in Wyoming and Colorado/New Mexico respectively, the Carlin Trend, NV, and numerous arid regions, and various tectonic and volcanic related surface deformation sites.

Geologic Hazards:
I oversee a geomechanics lab used to conduct studies in the field of geologic hazards. Currently, the lab includes geotechnical equipment including Schmidt Hammer(s), a point load index testing apparatus, a computer-controlled soil direct shear apparatus, a computer-controlled rock joint shear apparatus (shared with the Mining Engineering and Management department at SD Mines and RESPEC Inc.), two drones used for photogrammetric studies, a slope inclinometer, vibrating wire crack meters and other field equipment. Rock load frames hosted in the MEM rock mechanics lab are also used in geomechanical studies.

Research Topics: Potential topics include, rock and soil slope stability studies, investigation of rockfall triggering mechanics, other rock and soil mechanics-based studies.

Research Skills / Software Familiarity:

- Extensive knowledge of InSAR processing packages including ROI_PAC, Diapasson, Gamma, and ESA's SNAP Sentinel 1 Toolbox
- Experience with post processing software such as ENVI, ArcGIS and ArcMap
- Knowledge of Linux platforms used to run software packages
- Extensive knowledge of geotechnical programs, including Gint, XSTABL, Slide, RocPlane, Swedge, RocData, RocLab, Dips, RocFall, CRSP and FLAC 2D
- Extensive familiarity and use of common Microsoft Office programs

Grants, Fellowships and Scholarships: (only funded proposals are listed)
<u>While at SD Mines:</u>

- 2024 – 2026 (PI)(Funding approved but delayed until January or July 2024) Project funded by Neolith Energy, LLC. Entitled *"Quantification of Ground Deformation in Clayton Vlaley, NV Using InSAR"* ($198,714)
- 2023 – 2024 (PI) Project funded by the City of Woods Cross, UT entitled *"Quantification of Land Subsidence Occurring Between 2016 and 2023 in Woods Cross, UT Using InSAR"* ($17,000)
- 2020 – 2021 (PI) South Dakota Space Grant Project Initiation Grant (PIG) Study entitled "*Establishing a Methodology for Utilizing Close-Range Photogrammetry to Generate High-Resolution, Spatially Referenced Three-Dimensional Models of Drill Core"* ($11,714)
- 2018 – 2019 (PI) West Dakota Water Development District study entitled *"Missouri River Water Allotment Study for Future Use Water Permit 1443-2"* ($37,341)
- 2018 – 2019 (Co-PI) SDSMT Mobil Computing Grant Proposal entitled *"Active Online Learning Modules for Introducing Well Tests in Groundwater Education and Research"* ($29,500)
- 2017 – 2018 (Co-PI) DOE proposal entitled *"Deep Borehole Field Test: Site and Characterization Borehole Investigation* (SDSM&T portion of Phase 1 - $20,500)
- 2016 – 2017 (PI) Project funded by the City of Woods Cross, UT entitled *"Quantification and Characterization of Ground Surface Deformation in Woods Cross, UT using InSAR"* ($15,490)
- 2015 – 2018 (Co-PI) JAXA data grant entitled *"Validating Interpretations of ALOS-2 Data for the 2015 M8.3 Chile Earthquake; Calibration of Co-Seismic and Post-Seismic Deformation and Assessment of Transient Seismic Hazard"* (250 ALOS – 2 SAR scenes)

- 2015 – 2017 (Co-PI) DoD DURIP equipment proposal entitled *"Combined Mechanical and Optical Experimental Setup (CMOES)"* ($268,828)
- 2014 – 2019 (Co-PI) NIOSH funded project entitled "*Numerical Modeling of Gas Emissions and Cave Ventilation in Block Caving Mines"* ($1,250,000)
- 2014 – 2015 (PI) Desert Research Institute funded project entitled *"Indian Wells Valley InSAR Study"* ($22,759)
- 2014 (Co-PI) South Dakota Board of Regents equipment grant entitled "*Acquisition of a Rapid Triaxial Rock Testing System"* ($75,000)
- 2013 – 2016 (Co-PI) NSF funded project entitled "*Collaborative Research: FEM-Based Inverse Methods to Estimate Nonlinear Geometric Source Parameters from Geodetic Data"* ($320,807)
- 2011-2012 (PI) Utah Geological Survey funded project entitled "*Cedar Valley InSAR Study"* ($20,071)
- 2008-2009 (PI) South Dakota Space Grant Consortium Project Initiation Grant (PIG) entitled "*Establishment of C-Band and L-Band InSAR Processing Capabilities at the South Dakota School of Mines and Technology* ($10,080)
- 2008 – 2009 (PI) Nelson Research Grant (SDSM&T) entitled *"Acquisition of a Linux Workstation to be Used in Establishing a Multidisciplinary InSAR Laboratory at the South Dakota School of Mines and Technology"* ($4,000)

<u>As a student at the University of Nevada, Reno</u>

- 2006-2007 Nevada Space Grant Fellow ($25,000)
- 2004-2005 Graduate Winn Scholarship ($10,000)
- 2002-2003 Larry T. Larson Graduate Field Scholarship ($1,000)
- 2000-2001 Jacklin Scholarship ($500)
- 1999-2000 Larry Nobel Mines Scholarship ($1,191)
- 1999-2000 Bob Davis Scholarship ($1,500)
- 1998-1999 Einfeld Bell Memorial Scholarship ($1,000)

Awards and Honors:

- 2017-18 Benard A. Ennenga Faculty Award (SD Mines) recognizing excellence in teaching and/or motivating students.
- 2010 Outstanding Student Organization Faculty Advisor nominee
- 2008 Mackay School of Earth Science and Engineering Most Outstanding Ph. D. Candidate in Geological Engineering
- 2007 Mackay School of Earth Science and Engineering Most Outstanding Ph. D. Candidate in Geological Engineering
- 2004 Mackay School of Mines Most Outstanding M.S. Candidate in Geological Engineering
- 2004 University of Nevada, Reno, College of Science Poster Competition Winner
- 2003 Student Abstract Award, AEG Annual Meeting (Vail, CO)
- 1999 Selected as a member of Tau Beta Pi Engineering Honor's Society (2000/2001 Nevada Alpha Chapter President)

Professional Affiliations:

- American Geophysical Union
- Geological Society of America
- Association of Engineering Geology
- American Rock Mechanics Association
- Society for Mining Metallurgy & Exploration
- Darton Geological Society

Publications/Abstracts (reverse chronological order):

*Reimers, C., **Katzenstein, K.**, Roggenthen, W., 2020, "Use of Close-Range Photogrammetry to generate 3-D Models of Drill Core", Program with Abstracts, AEG Annual Meeting. (Published)*

*Coupe, B., and **Katzenstein, K.**, 2020, "The Influence of Deep-Seated Slope Failures on the Evolution of the Cretaceous Hogback in the Black Hills of South Dakota", Program with Abstracts, AEG Annual Meeting. (Published)*

***Katzenstein, K.,** Davis, A., Kenner, S., Anderson, M., Lisenbee, A., Hedman, K.*, Noteboom, H.*, Wess, R.*, 2019, Missouri River Water Allotment Study for Future Use Water Permit 1443-2, Final report submitted to the West Dakota Water Development District, 32 pages. (published on-line with WDWDD here)*

***Katzenstein, K.,** Huber, R.*, Bilderback, E., Hunt-Foster, R., 2019, Ongoing Crack Monitoring at the Carnegie Quarry, Dinosaur National Monument, Utah, Program with Abstracts, Annual Meeting of the Geological Society of America, Phoenix, AZ. (Published)*

*Tung, S., **Katzenstein, K.**, Masterlark, T., Lei, J., Wauthier, C., and Petley, D., 2019, Sensitivities of Geodetic Source Analyses to Elastic Crust Heterogeneity Constrained by Seismic Tomography for the 2017 Mw6.5 Jiuzhaigou, China, Earthquake. Seismological Research Letters, v. 90, n. 5. https://doi.org/10.1785/0220180272*

*Ajayi, K. M., Shahbazi, K., Tukkaraja, P., and **Katzenstein, K.**, (2019) Prediction of Airway Resistance in Panel Cave Mines using a Discrete and Continuum Model, International Journal of Mining Science and Technology https://doi.org/10.1016/j.ijmst.2019.02.004*

*Tukkaraja, P., Pan, Y., Bhargava, R., and **Katzenstein, K.**, 2019, Computational and Experimental Investigation of Cave Characteristic Curves in a Block Caving Mine, 17th North American Mine Ventilation Symposium, Montreal, Canada.*

*Pan, Y., Bhargava, R., Tukkaraja, P., **Katzenstein, K.**, 2019, Experimental and Computational Investigation of Airflow Resistance of a Mature Cave in a Block Cave Mine, 17th North American Mine Ventilation Symposium, Montreal, Canada.*

*Pan Y, Jha A, Tukkaraja P, **Katzenstein K**, Loring D (2019) Experimental investigation of gas dilution strategies in block cave mines. 2019 SME Annual Conference and Expo, Denver, CO, February 2019*

*Ajitha S.S. Bhargava, R, Pan, Y., Jha, A., Tukkaraja, P., Shahbazi, K., **Katzenstein, K.**, and Loring, D. (2019) A Preliminary Experimental Investigation of the Airflow Resistance of an Evolving Cave in a Block/Panel Cave Mine. In: Chang X. (eds) Proceedings of the 11th International Mine Ventilation Congress. Springer, Singapore*

*Bhargava R., Tukkaraja P., Shahbazi K., **Katzenstein K.**, and Loring D. (2019) CFD Analysis of the Effect of Porosity, Quantity and Emanating Power Variation on Gas Emissions in Block/Panel Cave Mines. In: Chang X. (eds) Proceedings of the 11th International Mine Ventilation Congress. Springer, Singapore*

*Pan Y., Bhargava, R, Jha, A., Tukkaraja, P., Shahbazi, K., **Katzenstein, K.**, and Loring, D.. (2019) An Investigation of the Effects of Particle Size, Porosity, and Cave Size on the Airflow Resistance of a Block/Panel Cave. In: Chang X. (eds) Proceedings of the 11th International Mine Ventilation Congress. Springer, Singapore*

*Ajayi, K., Shahbazi, K., Tukkaraja, P., & **Katzenstein, K.**, 2019, Prediction of Airway Resistance in Panel Cave Mines using a Discrete and Continuum Model. 2019 SME Annual Conference. Denver, Colorado.*

*Pan, Y., Jha, A., Tukkaraja, P., **Katzenstein, K.**, & Loring, D, 2019, Experimental Investigation of Gas Dilution Strategies in Block Cave Mines. 2019 SME Annual Conference. Denver, CO.*
*Ajitha, S., Tukkaraja, P., Shahbazi, K., **Katzenstein, K.**, Loring, D., (2018) Fragmentation Analysis of a Propagating Cave in a Block/Panel Cave Mine: A Fracture Network Approach, 2018 SME Annual Conference and Expo, Minneapolis, MN.*

*Ajayi, K., Shahbazi, K., Tukkaraja, P., & **Katzenstein, K.** (2018). Estimation of Radon Diffusivity Tensor for Fractured Rocks in Cave Mines using a Discrete Fractured Network Model. Journal of Environmental Radioactivity, v. 196. https://doi.org/10.1016/j.jenvrad.2018.11.003*

*Ajayi, K. M., Shahbazi, K., Tukkaraja, P., and **Katzenstein, K.**, (2018) A discrete model for prediction of radon flux from fracture rocks, Journal of Rock Mechanics and Geotechnical Engineering, https://doi.org/10.1016/j.jrmge.2018.02.009*

*Pan, Y., Bhargava, R., Ajitha, S., Tukkaraja, P., Shahbazi, K., **Katzenstein, K.**, and Loring, D., (2018) Effect of Air Gap on the Ventilation System of a Block/Panel Cave Mine: An Experimental Study, 2018 SME Annual Conference and Expo, Minneapolis, MN.*

*Bhargava, R., Pan, Y., Ajitha, S., Tukkaraja, K., Shahbazi, K., **Katzenstein, K.**, and Loring, D., (2018) A Scale Model Investigation of Airflow Resistance of a Block/Panel Cave Under Changing Cave Porosity Conditions, 2018 SME Annual Conference and Expo, Minneapolis, MN.*

*Ajayi, K., Shahbazi, K., Tukkaraja, P., **Katzenstein, K.**, and Loring, D., (2018) Numerical Investigation of Radon Control Measures in Block/Panel Cave Mines, 2018 SME Annual Conference and Expo, Minneapolis, MN.*

*Jha, A., Pan, Y., Bhargava, R., Tukkaraja, P., **Katzenstein, K.** An Experimental Investigation of the Airflow Requirements for Underground Mines in Case a Duct Fire. 2018 SME Conference, February 25-28, 2018, Minneapolis, MN.*

*Bhargava, R., Pan, Yong., Sreekumar Ajitha, S., **Katzenstein, K.**, and Tukkaraja, P. (2018, April 3). A Sale Model Investigation of Airflow Resistance of a Block/Panel Cave under Changing Porosity Conditions. 9th Annual SD Mines Student Research Symposium. Rapid City, SD, United States.*

*Ajayi, K. M., Shahbazi, K., Tukkaraja, P., and **Katzenstein, K.,** (2018) Numerical Investigation of the Effectiveness of Radon Control Measures in Cave Mines, International Journal of Mining Science and Technology, https://doi.org/10.1016/j.ijmst.2018.07.006*

*Huber, R., and **Katzenstein, K.**, (2017) Evaluation of Rock Slope Stability and Crack Monitoring at Dinosaur National Monument, Annual Meeting of the Association of Environmental and Engineering Geologists, Colorado Springs, CO.*

*Baysal, A., Ajayi, K., Tukkaraja, P., Shahbazi, K., **Katzenstein, K.**, and Loring, D., (2017) Prediction of Airflow Resistance of a Mature Panel Cave., 16th North American Mine Ventilation Symposium, Golden, CO.*

*Erogul, D., Ajayi, K., Tukkaraja, P., Shahbazi, K., **Katzenstein, K.**, and Loring, D., (2017) Evaluation of Cave Airflow Resistance Associated with Multiple Air Gap Geometries during Cave Evolution. 16th North American Mine Ventilation Symposium, Golden, CO.*

*Ajayi, K., Shahbazi, K., Tukkaraja, P., and **Katzenstein, K.**, (2017) Numerical Prediction of Radon Flux through Fractured Rocks in Cave Mines, 8th Annual SD Mines Student Research Symposium, Rapid City, SD.*

*Ajayi, K., Shahbazi, K., Tukkaraja, P., and **Katzenstein, K.**, (2017) Discrete Modeling of Radon Gas Migration through the Fractured Zones in Caving Mines. SME Annual Conference, Denver, CO.*

***Katzenstein, K.**, (2017) Quantification and Characterization of Ground Motion in Woods Cross, Utah Using InSAR, Final Technical Report to the City of Woods Cross, UT, 98 pages.*

*Li, Liangping, Zhang, M., **Katzenstein, K.**, (2017) Calibration of a Land Subsidence Model using InSAR Data via the Ensemble Kalman Filter, Groundwater.*

*Tukkaraja, P., Ajayi, K. M.**, Shahbazi, K., **Katzenstein, K.**, and Loring, D., (2016) Modelling of Radon Gas Diffusion Through Fractured Rock in Cave Mines, Proceedings of the 2016 SME Annual Conference, Phoenix, AZ.*

*Ajayi, K. M., Tukkaraja, P., Shahbazi, K., **Katzenstein, K.**, and Loring, D., (2015) Computational Fluid Dynamics Study of Radon Gas Migration in a Block Caving Mine, 15th North American Mine Ventilation Symposium, Blacksburg Virginia.*

*Erogul, D., Baysal, A, Ajayi, K. M., Tukkaraja, P., Shahbazi, K., **Katzenstein, K.**, and Loring, D., (2015) Effect of the Air Gap Associated with Cave Evolution on Cave Resistance, 15th North American Mine Ventilation Symposium, Blacksburg Virginia.*

*Beil, A., **Katzenstein, K.**, Emanual, K., (2015), Preliminary GIS Evaluation of Ground Movement at Cook Lake, WY., Abstracts with Programs, Geological Society of America, Casper, WY.*

*Grigg, K. M., **Katzenstein, K. W.**, (2013), Using InSAR and Groundwater Pumping Data to Model Land Subsidence from Coalbed Methane Production in the Powder River Basin, Wyoming, Abstracts with Programs, Geological Society of America, Denver, CO.*

***Katzenstein, Kurt W.**, (2013) Evaluating Potential Land Subsidence Induced by Groundwater Withdrawal from the Indian Wells Valley, CA Using InSAR, Abstracts with Programs, Geological Society of America, Denver, CO.*

***Katzenstein, Kurt W.**, (2013), InSAR Analysis of Ground Surface Deformation in Cedar Valley, Iron County, Utah, Utah Geological Survey, Miscellaneous Publication 13-5, 44 pages.*
https://ugspub.nr.utah.gov/publications/misc_pubs/mp-13-5.pdf

*Koth, K. R, Long, A., Davis, K., Irons, T., Roggenthen, W., **Katzenstein, K.**, McKaskey, J., (2013), Geophysical Methods for Characterization of Karst Features in the Madison Aquifer, Proceedings of the Western South Dakota Hydrology Conference, Rapid City, SD*

***Katzenstein, Kurt W.**, (2012) Investigating Subsidence Resulting from Ground Water Withdrawal in the Cedar Valley, Utah Region Using InSAR, , Abstract H31F-1174 presented at 2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec.*

*Bell, John W., **Katzenstein, Kurt**, (2012) InSAR Analysis of Aquifer-System Response to 20 Years of Mine-Dewatering in the Carling Gold Trend, North-Central Nevada, Abstract H24C-03 presented at 2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec.*

*Yarbrough, Lance D., and **Katzenstein, Kurt W**., (2012) Development of Teaching Modules for Geology and Engineering Coursework Using Terrestrial LiDAR Scanning Systems, Abstract IN43B-1523 presented at 2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec.*

***Katzenstein, Kurt W.**, (2012) Investigation of Subsidence in the Cedar Valley, UT Area Using InSAR, , Annual Meeting of the Association of Engineering Geology, Salt Lake City, UT.*

*Grigg, Kathleen M., **Katzenstein, Kurt W.**, and Davis, Arden D., (2012) Using InSAR technology and groundwater pumping data to model land subsidence from coal bed methane production in the Powder River Basin, Wyoming, Proceedings of the Western South Dakota Hydrology Conference, Rapid City, SD.*

***Katzenstein, Kurt W.**, (2012) InSAR Identifies Subsidence Resulting from Coalbed Methane Production in the San Juan Basin, Colorado and New Mexico, Abstracts with Programs – Geological Society of America, Albuquerque, NM.*

*Grigg, Kathleen M., **Katzenstein, Kurt W.**, and Davis, Arden D., (2012) Using Insar Technology and Groundwater Pumping Data to Model Land Subsidence from Coal Bed Methane Production in the Powder River Basin, Wyoming, Abstracts with Programs – Geological Society of America, Albuquerque, NM.*

***Katzenstein, Kurt, W.**, (2011) InSAR as a Tool for Monitoring Ground-Surface Response to Coal Bed Methane Production, Annual Meeting of the Association of Engineering and Environmental Geologists, Anchorage, AK,*

***Katzenstein, Kurt W.**, Uzunlar, Nuri, (2011) A Field Camp Geared Towards Geological Engineering Majors, Annual Meeting of the Association of Engineering and Environmental Geologists, Anchorage, AK,*

***Katzenstein, Kurt W.**, (2010) Monitoring Surface Response to Coal Bed Methane Production in the Powder River Basin, Wyoming Using InSAR, Annual Meeting of the Geological Society of America, Denver, CO.*

Katzenstein, Kurt W.**, (2010) InSAR-Identified Land Subsidence Resulting from CBM Production, Powder River Basin, WY, New Horizons Oil & Gas Conference, Rapid City, SD **(Invited Presentation)

***Katzenstein, Kurt W.**, (2010) InSAR-Identified Surface Subsidence Resulting from Coal Bed Methane Production in the Powder River Basin, Wyoming, Annual Meeting of the Rocky Mountain Section of the Geological Society of America, Rapid City, SD.*

***Katzenstein, Kurt W.**, (2009) InSAR Identified Surface Deformation in the Black Hills Region of South Dakota and Wyoming, Annual Meeting of the Geological Society of America, Portland, OR.*

***Katzenstein, Kurt W.**, Bell, John W., Watters, Robert J., and Stetler, Larry D., (2009) Calibration of an RMR Based Method of Predicting Dewatering-Induced Bedrock Subsidence Using InSAR and Hydrostatic Water Level Systems at Two Major Dewatering Sites, Annual Meeting of the Association of Engineering Geology, South Lake Tahoe, NV.*

***Katzenstein, K. W.**, Bell, J. W., and Watters, R. J., (2008) One Dimensional Bedrock-Aquifer Subsidence Model Based on InSAR-Observed Mine Subsidence in North-Central Nevada, Eos Trans. AGU, 89(52), Fall Meet. Suppl., Abstract G31B-0654.*

***Katzenstein, Kurt W.**, (2008) Mechanics of InSAR-Identified Bedrock Subsidence Associated with Mine-Dewatering in North-Central Nevada, (**Ph. D. Dissertation**), University of Nevada, Reno.*

*Bell, John W., **Katzenstein, Kurt W.**, Oppliger, Gary L., and Hammond, William C., (2008) InSAR Search for Earthquakes Across the Sierra Nevada-Basin and Range Transition Zone, Abstract #S23B-1892 presented at 2008 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec.*

***Katzenstein, Kurt W.**, Bell, John W., and Watters, Robert, J., (2008) One Dimensional Bedrock-Aquifer Subsidence Model Based on InSAR-Observed Mine Subsidence in North-Central Nevada, Abstract # G31B-0654 presented at 2008 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec.*

***Katzenstein, Kurt W.**, Bell, John W., and Watters, Robert J., (2007) InSAR Identifies Mine-Dewatering Associated Bedrock Compaction and Subsidence in North-Central Nevada, Abstract #G51C-0625 presented at 2007 Fall Meeting, AGU, San Francisco, Calif., 4-8 Dec.*

***Katzenstein, Kurt W.**, Bell, John W., and Watters, Robert J. (2007) InSAR-Identified Bedrock Compaction and Subsidence Associated with Mine-Dewatering in North-Central Nevada, Annual Meeting of the Geological Society of America, Denver, CO.*

***Katzenstein, Kurt W.**, Bell, John W., Zhan, Johnny, and Listerud, Bill, (2007) InSAR Identified Bedrock Subsidence Associated with Mine-Dewatering in Central Nevada, Annual Meeting of the Nevada Water Resources Association, Sparks, NV.*

***Katzenstein, Kurt W.**, and Bell, John W., (2006) Bedrock Subsidence Associated with Mine-Dewatering Identified by InSAR in Central Nevada, Abstract #H51D-0516 presented at 2006 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.*

***Katzenstein, Kurt W.**, and Bell, John W., (2006) Using InSAR to Delineate Groundwater Related Ground Deformation in the Great Basin, Annual Meeting of the Geological Society of America, Philadelphia, PA.*

*Watters, Robert J., and **Katzenstein, Kurt W.**, (2006) Factors Influencing Subsurface Failure Geometry in Large-Scale Volcano Collapse, Annual Meeting of the Cordilleran Section of the Geological Society of America, Anchorage, AK*

***Katzenstein, Kurt W.**, and Bell, John W., (2006) InSAR Reveals Aquifer Response to Groundwater Use in the Yucca Mountain – Amargosa Valley – Ash Meadows Region, Southwestern Nevada/Southeastern California, Annual Conference of the Nevada Water Resources Association, Mesquite, NV*

***Katzenstein, Kurt W.**, and Bell, John W., (2005) InSAR Reveals a Potpourri of Deformation Signals in the Yucca Mountain – Amargosa Valley – Death Valley Region, Southwestern Nevada/Southeastern California, Abstract #G51C-0844 presented at 2005 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.*

***Katzenstein, Kurt W.**, (2004) Limit Equilibrium Analysis of the May 18, 1980 Rockslide-Avalanche at Mount Saint Helens, Washington, Utilizing Geotechnical Strength Data (**M.S. Thesis**), University of Nevada, Reno.*

*Watters, Robert J., **Katzenstein, Kurt W.**, and Thelen, Weston A. (2003) Calibration of Rockfall Simulation Programs, 54th Annual Highway Geology Symposium, Burlington, VT.*

***Katzenstein, Kurt W.**, and Watters, Robert J., (2003) Influence of the Geotechnical Properties of Dacite Domes on the 1980 Failure of Mt. St. Helens, Abstract #V51F-0337 presented at 2003 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.*

***Katzenstein, Kurt W.**, and Watters, Robert J., (2003) Insights into the Nature of the May 18, 1980 Catastrophic Landslide at Mt. St. Helens Utilizing Geotechnical Strength Data, Annual Meeting of the Association of Engineering Geology, Vail, CO.*

***Katzenstein, Kurt W.**, and Watters, Robert J., (2002) Reappraisal of the May 18, 1980 Failure of Mt. St. Helens WA., Annual Meeting of the Association of Engineering Geology, Reno, NV.*