



Gregory Deierlein

John A. Blume Professor in the School of Engineering
Civil and Environmental Engineering

CONTACT INFORMATION

- **Administrator**

Racquel Hagen - Administrative Associate

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Bio

BIO

Deierlein's research focuses on improving limit states design of constructed facilities through the development and application of nonlinear structural analysis methods and performance-based design criteria. Recent projects include the development and application of strength and stiffness degrading models to simulate steel and reinforced concrete structures, seismic design and behavior of composite steel-concrete buildings, analysis of inelastic torsional-flexural instability of steel members, and a fracture mechanics investigation of seismically designed welded steel connections.

ACADEMIC APPOINTMENTS

- Professor, Civil and Environmental Engineering

ADMINISTRATIVE APPOINTMENTS

- Director, John A. Blume Earthquake Engineering Center, (2002- present)

HONORS AND AWARDS

- Honorary Member, Earthquake Engineering Research Institute (2023)
- Honorary Member, Structural Engineers Association of Northern California (2022)
- Distinguished Member, American Society of Civil Engineers (2019)
- Shortridge Hardesty Award, American Society of Civil Engineers (2018)
- Academy of Distinguished Alumni, Department of Civil and Environmental Engineering, UC Berkeley (2016)
- Distinguished Lectureship, Earthquake Engineering Research Institute (2016)
- Krawinkler Award, Structural Engineers Association of Northern California (2016)
- Lifetime Achievement Award, American Institute of Steel Construction (2016)
- Mosseiff Award, American Society of Civil Engineers (2016)
- Academy of Distinguished Alumni, Department of Civil and Environmental Engineering, UT Austin (2014)
- Earthquake Spectra - Outstanding Paper Award, Earthquake Engineering Research Institute (2013, 2009)
- Elected Member, National Academy of Engineering (2013)

- Breakthrough Award, Popular Mechanics (2010)
- Top 25 Newsmakers of 2009, Engineering News-Record (2009)
- Norman Medal, American Society of Civil Engineers (2008, 2002, 1994)
- Raymond Reese Research Prize, American Society of Civil Engineers (2003, 1991)
- Special Achievement Award, American Institute of Steel Construction (2003)
- State-of-the-Art Award, American Society of Civil Engineers (2000,1995)
- Huber Research Prize, American Society of Civil Engineers (2000)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, Board of Directors, Earthquake Engineering Research Institute (2016 - 2020)
- Member, National Academy of Engineering (2013 - present)
- Member, Board of Trustees, Geohazards International (2016 - present)
- Member, Specification Committee, American Institute of Steel Construction (1992 - present)

PROFESSIONAL EDUCATION

- PhD, University of Texas, Austin (1988)
- MS, University of California at Berkeley (1982)
- BS, Cornell University (1981)

Teaching

COURSES

2023-24

- Advanced Structural Analysis: CEE 280 (Aut)
- Nonlinear Structural Analysis: CEE 282 (Win)
- Seismic Design Workshop: CEE 83 (Aut)
- Structural Design: CEE 182 (Win)

2022-23

- Advanced Structural Analysis: CEE 280 (Aut)
- Nonlinear Structural Analysis: CEE 282 (Win)
- Structural Design: CEE 182 (Win)

2021-22

- Advanced Structural Analysis: CEE 280 (Aut)
- Nonlinear Structural Analysis: CEE 282 (Win)

2020-21

- Advanced Structural Analysis: CEE 280 (Aut)
- Integrated Civil Engineering Design Project: CEE 183 (Spr)
- Nonlinear Structural Analysis: CEE 282 (Win)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Sina Abrari Vajari, Yitao Qiu

Doctoral Dissertation Advisor (AC)

Juan Miguel Navarro Carranza

Master's Program Advisor

Ali Erfani, Peter Harijanto, Spyridon Loukatos, Duke Qiu, Juan Real Di Bello, Sheel Sansare, Annabelle Tzou

Doctoral (Program)

Peter Lee, Mia Lochhead, Juan Valois Martinez

Publications

PUBLICATIONS

- **Response spectrum method for structures subjected to vertical ground motions: Absolute acceleration method** *EARTHQUAKE ENGINEERING & STRUCTURAL DYNAMICS*
Acosta, A. A., Miranda, E., Deierlein, G. G.
2023
- **Simulation-based methodology to identify damage indicators and safety thresholds for post-earthquake evaluation of structures** *EARTHQUAKE ENGINEERING & STRUCTURAL DYNAMICS*
Galvis, F. A., Hulsey, A. M., Baker, J. W., Deierlein, G. G.
2023
- **Surrogate modeling of structural seismic response using probabilistic learning on manifolds** *EARTHQUAKE ENGINEERING & STRUCTURAL DYNAMICS*
Zhong, K., Navarro, J. G., Govindjee, S., Deierlein, G. G.
2023
- **Cyclic adaptive cohesive zone model to simulate ductile crack propagation in steel structures due to ultra-low cycle fatigue** *FATIGUE & FRACTURE OF ENGINEERING MATERIALS & STRUCTURES*
Ziccarelli, A., Kanvinde, A., Deierlein, G.
2023
- **Community Perspectives on Simulation and Data Needs for the Study of Natural Hazard Impacts and Recovery** *NATURAL HAZARDS REVIEW*
Zsarnoczay, A., Deierlein, G. G., Williams, C. J., Kijewski-Correa, T. L., Esnard, A., Lowes, L. N., Johnson, L.
2023; 24 (1)
- **A thermodynamically consistent finite strain phase field approach to ductile fracture considering multi-axial stress states** *COMPUTER METHODS IN APPLIED MECHANICS AND ENGINEERING*
Vajari, S., Neuner, M., Arunachala, P., Ziccarelli, A., Deierlein, G., Linder, C.
2022; 400
- **Experimental investigation of the effect of Lode angle on fracture initiation of steels** *ENGINEERING FRACTURE MECHANICS*
Liu, X., Yan, S., Rasmussen, K. R., Deierlein, G. G.
2022; 271
- **High-resolution post-earthquake recovery simulation: Impact of safety cordons** *EARTHQUAKE SPECTRA*
Hulsey, A. M., Baker, J. W., Deierlein, G. G.
2022; 38 (3): 2061-2087
- **Verification of void growth-based exponential damage function for ductile crack initiation over the full range of stress triaxialities** *ENGINEERING FRACTURE MECHANICS*
Liu, X., Yan, S., Rasmussen, K. R., Deierlein, G. G.
2022; 269
- **Site-specific adjustment framework for incremental dynamic analysis (SAF-IDA)** *Earthquake Spectra*
Zhong, K., Chandramohan, R., Baker, J. W., Deierlein, G. G.
2022

- **Integration of an adaptive cohesive zone and continuum ductile fracture model to simulate crack propagation in steel structures** *ENGINEERING FRACTURE MECHANICS*
Pericoli, V., Lao, X., Ziccarelli, A., Kanvinde, A., Deierlein, G.
2021; 258
- **A stress-weighted ductile fracture model for steel subjected to Ultra Low Cycle Fatigue** *ENGINEERING STRUCTURES*
Smith, C., Ziccarelli, A., Terashima, M., Kanvinde, A., Deierlein, G.
2021; 245
- **Influence of High-Strength Reinforcing Bars on Seismic Safety of Concrete Frames** *ACI STRUCTURAL JOURNAL*
Zhong, K., Ghannoum, W. M., Deierlein, G. G.
2021; 118 (5): 299-311
- **Generalized modified modal superposition procedure for seismic design of rocking and pivoting steel spine systems** *JOURNAL OF CONSTRUCTIONAL STEEL RESEARCH*
Martin, A., Deierlein, G. G.
2021; 183
- **A Cloud-Enabled Application Framework for Simulating Regional-Scale Impacts of Natural Hazards on the Built Environment** *FRONTIERS IN BUILT ENVIRONMENT*
Deierlein, G. G., McKenna, F., Zsarnoczay, A., Kijewski-Correa, T., Kareem, A., Elhaddad, W., Lowes, L., Schoettler, M. J., Govindjee, S.
2020; 6
- **Tall building performance-based seismic design using SCEC broadband platform site-specific ground motion simulations** *EARTHQUAKE ENGINEERING & STRUCTURAL DYNAMICS*
Zhong, K., Lin, T., Deierlein, G. G., Graves, R. W., Silva, F., Luco, N.
2020
- **Parametric Study of Seismic Isolation Properties for Light-Frame Houses** *JOURNAL OF STRUCTURAL ENGINEERING*
Jampole, E., Swensen, S., Miranda, E., Deierlein, G. G.
2020; 146 (10)
- **Probabilistic Space- and Time-Interaction Modeling of Mainshock Earthquake Rupture Occurrence** *BULLETIN OF THE SEISMOLOGICAL SOCIETY OF AMERICA*
Ceferino, L., Kiremidjian, A., Deierlein, G.
2020; 110 (5): 2498–2518
- **Effective plans for hospital system response to earthquake emergencies.** *Nature communications*
Ceferino, L., Mitrani-Reiser, J., Kiremidjian, A., Deierlein, G., Bambaren, C.
2020; 11 (1): 4325
- **Structural topology optimization of tall buildings for dynamic seismic excitation using modal decomposition** *ENGINEERING STRUCTURES*
Martin, A., Deierlein, G. G.
2020; 216
- **Efficient intensity measures and machine learning algorithms for collapse prediction of tall buildings informed by SCEC CyberShake ground motion simulations** *EARTHQUAKE SPECTRA*
Bijelic, N., Lin, T., Deierlein, G. G.
2020; 36 (3): 1188–1207
- **Predicting earthquake-induced sliding displacements using effective incremental ground velocity** *EARTHQUAKE SPECTRA*
Jampole, E., Miranda, E., Deierlein, G. G.
2020; 36 (1): 378–99
- **Quantification of the Influence of Deep Basin Effects on Structural Collapse Using SCEC CyberShake Earthquake Ground Motion Simulations** *EARTHQUAKE SPECTRA*
Bijelic, N., Lin, T., Deierlein, G. G.
2019; 35 (4): 1845–64
- **Evaluation of Building Collapse Risk and Drift Demands by Nonlinear Structural Analyses Using Conventional Hazard Analysis versus Direct Simulation with CyberShake Seismograms** *BULLETIN OF THE SEISMOLOGICAL SOCIETY OF AMERICA*

- Bijelic, N., Lin, T., Deierlein, G. G.
2019; 109 (5): 1812–28
- **Proposed Updates to the ASCE 41 Nonlinear Modeling Parameters for Wide-Flange Steel Columns in Support of Performance-Based Seismic Engineering** *JOURNAL OF STRUCTURAL ENGINEERING*
Lignos, D. G., Hartloper, A. R., Elkady, A., Deierlein, G. G., Hamburger, R.
2019; 145 (9)
 - **Comparative risk-based seismic assessment of 1970s vs modern tall steel moment frames** *JOURNAL OF CONSTRUCTIONAL STEEL RESEARCH*
Hutt, C., Rossetto, T., Deierlein, G. G.
2019; 159: 598–610
 - **Capacity Design Procedure for Rocking Braced Frames Using Modified Modal Superposition Method** *JOURNAL OF STRUCTURAL ENGINEERING*
Martin, A., Deierlein, G. G., Ma, X.
2019; 145 (6)
 - **Development and Testing of a Friction/Sliding Connection to Improve the Seismic Performance of Gypsum Partition Walls** *EARTHQUAKE SPECTRA*
Araya-Letelier, G., Miranda, E., Deierlein, G.
2019; 35 (2): 653–77
 - **Discussion of "Experimental Evaluation of Single-Bolted Lap Joints at Elevated Temperatures" by Erica C. Fischer, Amit H. Varma, and Qiaqia Zhu** *JOURNAL OF STRUCTURAL ENGINEERING*
Teh, L. H., Deierlein, G. G.
2018; 144 (12)
 - **Effective Incremental Ground Velocity for Estimating the Peak Sliding Displacement of Rigid Structures to Pulse-Like Earthquake Ground Motions** *JOURNAL OF ENGINEERING MECHANICS*
Jampole, E., Miranda, E., Deierlein, G.
2018; 144 (12)
 - **Regional Multiseverity Casualty Estimation Due to Building Damage Following a Mw 8.8 Earthquake Scenario in Lima, Peru** *EARTHQUAKE SPECTRA*
Ceferino, L., Kiremidjian, A., Deierlein, G.
2018; 34 (4): 1739–61
 - **Probabilistic Model for Regional Multiseverity Casualty Estimation due to Building Damage Following an Earthquake** *ASCE-ASME JOURNAL OF RISK AND UNCERTAINTY IN ENGINEERING SYSTEMS PART A-CIVIL ENGINEERING*
Ceferino, L., Kiremidjian, A., Deierlein, G.
2018; 4 (3)
 - **Validation of the SCEC Broadband Platform simulations for tall building risk assessments considering spectral shape and duration of the ground motion** *EARTHQUAKE ENGINEERING & STRUCTURAL DYNAMICS*
Bijelic, N., Lin, T., Deierlein, G. G.
2018; 47 (11): 2233–51
 - **Integrating visual damage simulation, virtual inspection, and collapse capacity to evaluate post-earthquake structural safety of buildings** *EARTHQUAKE ENGINEERING & STRUCTURAL DYNAMICS*
Burton, H. V., Deierlein, G. G.
2018; 47 (2): 294–310
 - **Measuring the Impact of Enhanced Building Performance on the Seismic Resilience of a Residential Community** *EARTHQUAKE SPECTRA*
Burton, H. V., Deierlein, G., Lallemand, D., Singh, Y.
2017; 33 (4): 1347–67
 - **Calibration of Continuum Cyclic Constitutive Models for Structural Steel Using Particle Swarm Optimization** *JOURNAL OF ENGINEERING MECHANICS*
Smith, C., Kanvinde, A., Deierlein, G.
2017; 143 (5)
 - **A local criterion for ductile fracture under low-triaxiality axisymmetric stress states** *ENGINEERING FRACTURE MECHANICS*
Smith, C., Kanvinde, A., Deierlein, G.
2017; 169: 321-335

- **Estimation and impacts of model parameter correlation for seismic performance assessment of reinforced concrete structures** *STRUCTURAL SAFETY*
Gokkaya, B. U., Baker, J. W., Deierlein, G. G.
2017; 69: 68–78
- **Calibration of Model to Simulate Response of Reinforced Concrete Beam-Columns to Collapse** *ACI STRUCTURAL JOURNAL*
Haselton, C. B., Liel, A. B., Taylor-Lange, S. C., Deierlein, G. G.
2016; 113 (6): 1141-1152
- **Rocking Spine for Enhanced Seismic Performance of Reinforced Concrete Frames with Infills** *JOURNAL OF STRUCTURAL ENGINEERING*
Burton, H. V., Deierlein, G. G., Mar, D., Mosalam, K. M., Rodgers, J., Gunay, S.
2016; 142 (11)
- **Full-Scale Dynamic Testing of a Sliding Seismically Isolated Unibody House** *EARTHQUAKE SPECTRA*
Jampole, E., Deierlein, G., Miranda, E., Fell, B., Swensen, S., Acevedo, C.
2016; 32 (4): 2245-2270
- **Seismic Loss and Downtime Assessment of Existing Tall Steel-Framed Buildings and Strategies for Increased Resilience** *JOURNAL OF STRUCTURAL ENGINEERING*
Hutt, C. M., Almufti, I., Willford, M., Deierlein, G.
2016; 142 (8)
- **Quantifying the impacts of modeling uncertainties on the seismic drift demands and collapse risk of buildings with implications on seismic design checks** *EARTHQUAKE ENGINEERING & STRUCTURAL DYNAMICS*
Gokkaya, B. U., Baker, J. W., Deierlein, G. G.
2016; 45 (10): 1661-1683
- **Framework for Incorporating Probabilistic Building Performance in the Assessment of Community Seismic Resilience** *JOURNAL OF STRUCTURAL ENGINEERING*
Burton, H. V., Deierlein, G., Lallemand, D., Lin, T.
2016; 142 (8)
- **Impact of hazard-consistent ground motion duration in structural collapse risk assessment** *EARTHQUAKE ENGINEERING & STRUCTURAL DYNAMICS*
Chandramohan, R., Baker, J. W., Deierlein, G. G.
2016; 45 (8): 1357-1379
- **Quantifying the Influence of Ground Motion Duration on Structural Collapse Capacity Using Spectrally Equivalent Records** *EARTHQUAKE SPECTRA*
Chandramohan, R., Baker, J. W., Deierlein, G. G.
2016; 32 (2): 927-950
- **Behavior of Screw and Adhesive Connections to Gypsum Wallboard in Wood and Cold-Formed Steel-Framed Wallettes** *JOURNAL OF STRUCTURAL ENGINEERING*
Swensen, S., Deierlein, G. G., Miranda, E.
2016; 142 (4)
- **Design Concepts for Controlled Rocking of Self-Centering Steel-Braced Frames** *JOURNAL OF STRUCTURAL ENGINEERING*
Eatherton, M. R., Ma, X., Krawinkler, H., Mar, D., Billington, S., Hajjar, J. F., Deierlein, G. G.
2014; 140 (11)
- **Quasi-Static Cyclic Behavior of Controlled Rocking Steel Frames** *JOURNAL OF STRUCTURAL ENGINEERING*
Eatherton, M. R., Ma, X., Krawinkler, H., Deierlein, G. G., Hajjar, J. F.
2014; 140 (11)
- **Simulation of Seismic Collapse in Nonductile Reinforced Concrete Frame Buildings with Masonry Infills** *JOURNAL OF STRUCTURAL ENGINEERING*
Burton, H., Deierlein, G.
2014; 140 (8)
- **Probabilistic Formulation of the Cyclic Void Growth Model to Predict Ultralow Cycle Fatigue in Structural Steel** *JOURNAL OF ENGINEERING MECHANICS*
Myers, A. T., Kanvinde, A. M., Deierlein, G. G., Baker, J. W.
2014; 140 (6)

- **Component model calibration for cyclic behavior of a corrugated shear wall** *THIN-WALLED STRUCTURES*
Vigh, L. G., Liel, A. B., Deierlein, G. G., Miranda, E., Tipping, S.
2014; 75: 53-62
- **Component Model Calibration for Cyclic Behaviour of a Corrugated Shear Wall** *Thin Walled Structures*
Vigh, L. G., Deierlein, G., G., Miranda, E., Liel, A., B.
2014; 75: 53-62
- **Cost-Benefit Evaluation of Seismic Risk Mitigation Alternatives for Older Concrete Frame Buildings** *EARTHQUAKE SPECTRA*
Liel, A. B., Deierlein, G. G.
2013; 29 (4): 1391-1411
- **Seismic performance assessment of steel corrugated shear wall system using non-linear analysis** *JOURNAL OF CONSTRUCTIONAL STEEL RESEARCH*
Vigh, L. G., Deierlein, G. G., Miranda, E., Liel, A. B., Tipping, S.
2013; 85: 48-59
- **A Probabilistic Formulation of the Cyclic Void Growth Model to Predict Ultra-Low Cycle Fatigue in Structural Steel** *J. Eng. Mech., 10.1061/(ASCE)EM.1943-7889.0000728*
Myers, A., Kanvinde, A., Deierlein, G., Baker, J.
2013
- **Cost-Benefit Evaluation of Seismic Mitigation Alternatives for Older Reinforced Concrete Frame Buildings** *Earthquake Spectra*
Liel, A., B., Deierlein, G., G.
in press.2013: 1
- **Quasi-Static Cyclic Behavior of Controlled Rocking Steel Frames** *J. Struct. Eng., accepted for publication*
Eatherton, M., R., Ma, X., Krawinkler, H., Deierlein, G., G., Hajjar, J., F.
2013
- **Simulation of Seismic Collapse in Non-Ductile Reinforced Concrete Frame Buildings with Masonry Infills** *J. Struct. Eng., 10.1061/(ASCE)ST.1943-541X.0000921*
Burton, H., Deierlein, G.
2013
- **Seismic Performance Assessment of a Steel Corrugated Shear Wall System Using Non-linear Analysis** *Jl. of Constr. Steel Research*
Vigh, L. G., Deierlein, G., G., Miranda, E., Liel, A., B., Tipping, S.
2013; 85: 48-59
- **Using Collapse Risk Assessments to Inform Seismic Safety Policy for Older Concrete Buildings** *EARTHQUAKE SPECTRA*
Liel, A. B., Deierlein, G. G.
2012; 28 (4): 1495-1521
- **Expected earthquake damage and repair costs in reinforced concrete frame buildings** *EARTHQUAKE ENGINEERING & STRUCTURAL DYNAMICS*
Ramirez, C. M., Liel, A. B., Mitrani-Reiser, J., Haselton, C. B., Spear, A. D., Steiner, J., Deierlein, G. G., Miranda, E.
2012; 41 (11): 1455-1475
- **Seismic Assessment of Typical 1970's Tall Steel Moment Frame Buildings in Downtown San Francisco**
Ibrahim, A., Molina-Hutt, C., Willford, M., Deierlein, G., G.
2012
- **Toward a Performance-Based Design Framework for Self-Centering Rocking Braced-Frame Spine systems**
Eatherton, M., R., Deierlein, G., G., Ma, X., Krawinkler, H., Hajjar, J., F.
2012
- **Seismic Retrofit of Non-Ductile Reinforced Concrete Infill Frame Building Using Rocking Spines**
Burton, H., Deierlein, G., G.
2012
- **Preliminary Assessment of Ground Motion Duration Effects on Structural Collapse**
Foschaar, J., C., Baker, J., W., Deierlein, G., G.

2012

- **On the Role of Nonlinear Analysis in the Seismic Performance Assessment of Buildings**
Deierlein, G., G.
2012
- **Novel Design Methods for Improved Damage Resistance of Light-Weight Framed Structures**
Swensen, S., Miranda, M., Deierlein, G., G.
2012
- **Towards Creating Earthquake-Safe Communities: Seismic Retrofit of an Adobe School Building in Rural Peru Using Geomesh**
Cedillos, V., Tucker, B., Blondet, M., Carpio, J., Quispe, J., Rondon, S., Deierlein, Gregory, G.
2012
- **Performance-Based Earthquake Engineering: Innovations for Resilient Buildings and Communities** *Invited Plenary Lecture for Performance-Based and Life-Cycle Structural Engineering, Hong Kong*
Deierlein, G., G.
2012
- **Design Features and Criteria For Controlled Rocking Braced-Frame Systems**
Deierlein, G., G., Eatherton, M., Ma, X., Hajjar, J., F.
2012
- **Seismic Collapse Safety of Reinforced Concrete Buildings. II: Comparative Assessment of Nonductile and Ductile Moment Frames** *JOURNAL OF STRUCTURAL ENGINEERING-ASCE*
Liel, A. B., Haselton, C. B., Deierlein, G. G.
2011; 137 (4): 492-502
- **Seismic Collapse Safety of Reinforced Concrete Buildings. I: Assessment of Ductile Moment Frames** *JOURNAL OF STRUCTURAL ENGINEERING-ASCE*
Haselton, C. B., Liel, A. B., Deierlein, G. G., Dean, B. S., Chou, J. H.
2011; 137 (4): 481-491
- **Accounting for Ground-Motion Spectral Shape Characteristics in Structural Collapse Assessment through an Adjustment for Epsilon** *JOURNAL OF STRUCTURAL ENGINEERING-ASCE*
Haselton, C. B., Baker, J. W., Liel, A. B., Deierlein, G. G.
2011; 137 (3): 332-344
- **Experimental Investigation of Shear Transfer in Exposed Column Base Connections** *ENGINEERING JOURNAL-AMERICAN INSTITUTE OF STEEL CONSTRUCTION*
Gomez, I. R., Kanvinde, A. M., Deierlein, G. G.
2011; 48 (4): 245-264
- **Earthquake Resilient Steel Braced Frames with Controlled Rocking and Energy Dissipating Fuses** *Steel Construction: Design and Research*
Deierlein, G., G., Ma, X., Eatherton, M., Hajjar, J., Krawinkler, H., Takeuchi, T.
Wiley.2011: 171-175
- **Tohoku Pacific Ocean Earthquake and Tsunami: Quick observations from the PEER/EERI/GEER/Tsunami Field Investigation Team**
Mahin, S., Deierlein, G., Mosqueda, G., Scawthorn, C., Youssef, H., Kramer, S.
2011
- **Seismic Design, Simulation and Shake Table Testing of Self-Centering Braced Frame with Controlled Rocking and Energy Dissipating Fuses** , *J.A. Blume Earthquake Engrg. Center, TR 174, Stanford Universit*
Ma, X., Krawinkler, H., Deierlein, G., G.
2011
- **Earthquake Engineering and Research Needs in the Planning, Design, Construction and Operation of Buildings** *Grand Challenges in Earthquake Engineering Research: A Community Workshop Report, National Research Council, invited and reviewed keynote presentation*
Deierlein, G., G.
2011: 58-64
- **Capacity Design in Seismic Resistant Steel Buildings – A Reliability-Based Methodology to Establish Capacity- Design Factors** *Eurosteel 2011, Budapest, Paper A-0380*

-
- Victorsson, V., K., Deierlein, G., G., Baker, J., W.
2011: 6
- **Assessing the Scale of Environmental Impacts from a Major California Earthquake Recovery**
Burton, H., Deierlein, G., G., Lepech, M.
2011
 - **Shaking Table Test of Controlled Rocking Frames Using Multipurpose Testbed** *Eurosteel 2011, Budapest, Hungary, Paper A-0301*
Takeuchi, T., Midorikawa, M., Kasai, K., Deierlein, G.
2011: 6
 - **Nonlinear Structural Analysis for Seismic Design: A Guide for Practicing Engineers** *NEHRP Seismic Design Technical Brief 4, NIST GCR 10-917-5*
Deierlein, G., G., Reinhorn, A., M., Wilford, M., R.
2011
 - **NEES 2011 vision Report on Computational and Hybrid Simulation: Needs and Opportunities** *Committee on Simulation, Network for Earthquake Engineering Simulation*
Deierlein, G., G., Arduino, P., Assimaki, D., Caicedo, J., Dyke, S., Hachem, M.
2011
 - **Local Cyclic Void Growth Criteria for Ductile Fracture Initiation in Steel Structures with Significant Yielding** *Eurosteel 2011, Budapest, Paper A-0380*
Deierlein, G., G., Kanvinde, A., Myers, A., Fell, B.
2011: 6
 - **Earthquake Engineering Research Needs in the Planning, Design, Construction and Operation of Buildings** *Invited white paper and keynote presentation, NRC Workshop on Grand Challenges in Earthquake Engineering Research, Beckman Center*
Deierlein, G., G.
2011: 13
 - **Calibration of the SMCS Criterion for Ductile Fracture in Steels: Specimen Size Dependence and Parameter Assessment** *JOURNAL OF ENGINEERING MECHANICS-ASCE*
Myers, A. T., Kanvinde, A. M., Deierlein, G. G.
2010; 136 (11): 1401-1410
 - **Benefit-Cost Evaluation of Seismic Risk Mitigation in Existing Non-ductile Concrete Buildings** *Workshop on Advances in Performances-Based Earthquake Engineering*
Deierlein, G., Liel, A.
SPRINGER.2010: 341–348
 - **Large-Scale Shaking Table Test of Steel Braced Frame with Controlled Rocking and Energy-Dissipating Fuses**
Ma, X., Deierlein, G., G., Eatherton, M., Krawinkler, H., Hajjar, J., F., Takeuchi, T.
2010
 - **Chapter 32: Benefit-Cost Evaluation of Seismic Risk Mitigation in Existing Non-Ductile Concrete Buildings** *Advances in Performance- Based Earthquake Engineering*
Deierlein, G., G., Liel, A., B.
edited by Fardis, Springer, M.
2010: 1
 - **Seismic Resilience of Self-Centering Steel Braced Frames with Replaceable Energy-Dissipating Fuses – Part I: Large-Scale Cyclic Testing**
Hajjar, J., Eatherton, M., Ma, X., Deierlein, G., G., Krawinkler, H., Billington, S., B.
2010
 - **Example Application of the FEMA P695 (ATC-63) Methodology for the Collapse Performance Evaluation of Reinforced Concrete Special Moment Frame Systems**
Haselton, C., B., Liel, A., B., Deierlein, G., G.
2010
 - **Seismic Resilience of Self-Centering Steel Braced Frames with Replaceable Energy-Dissipating Fuses – Part II: E-Defense Shake Table Test**
Deierlein, G., G., Ma, X., Hajjar, J., Eatherton, M., Krawinkler, H., Takeuchi, T.
2010

- **Design and behavior of steel shear plates with openings as energy-dissipating fuses** *J.A. Blume Earthquake Engineering Center, TR 173, Stanford University*
Ma, X., Borchers, E., Peña, A., Krawinkler, H., Billington, S., Deierlein, G.
2010
- **Hybrid Simulation Testing of a Controlled Rocking Steel Braced Frame System**
Eatherton, M., Hajjar, J., F., Deierlein, G., G., Ma, X., Krawinkler, H.
2010
- **Hybrid Simulation Testing of a Controlled Rocking Steel Braced Frame System**
Eatherton, M., Hajjar, J., Deierlein, G., G., Ma, X., Krawinkler, H.
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