Daniel H. Kruger

PhD

Senior Managing Consultant, Manager of Iowa Operations

Dr. Kruger is a Senior Managing Consultant at Engineering Systems Inc. (ESi) and Manager of Iowa Operations. He has 30 years of experience in computer-generated 3D animations and other graphics for engineering and scientific illustration. He has supervised litigation projects, as well as a wide range of interactive, software, and educational projects. His project experience has involved aviation, patent infringement, ground vehicle, product liability, environmental, maritime, oil and gas operations, and construction delay/defect.

Prior to joining ESi, Dr. Kruger served as President at Demonstratives, Inc. for over 10 years. While there, he supervised litigation projects involving the design and manufacture of automotive and aerospace components, ground water, air contamination and maritime simulation models, accident reconstructions utilizing vehicle and occupant motion simulation software, performance of medical devices and implants, and hydroelectric, coal-fired, and nuclear power generation. Dr. Kruger also managed maintenance and development of their proprietary animation and simulation software tools.

Education

PhD, Aerospace Engineering and Engineering Mechanics.

Iowa State University. 1995

MS, Aerospace Engineering and Engineering Mechanics.

Iowa State University. 1992

BS, Physics and Mathematics. Morningside College. 1989

Positions Held

Engineering Systems Inc., Ames, Iowa

- Senior Managing Consultant, 2015 – Present
- Manager of Iowa Operations, 2015 – Present
- Senior Consultant, 2014–2015

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Areas of Specialization

- Animation
- Engineering & Scientific Visualization
- Demonstrative Aids & Exhibits

Demonstratives, Inc., Ames, Iowa

- President, 2004–2014
- Vice President, 2001–2004

Engineering Animation, Inc., Ames, Iowa

- Senior Project Manager, 1998–2001
- Project Manager, 1995–1998
- Dynamacist/Animator, 1994–1995

Iowa State University, Ames, Iowa

- National Science Foundation, Research Assistant, 1992–1995
- Naval Research Laboratory, Research Assistant, 1990–1992
- Graduate Teaching Assistant, 1990–1991

Morningside College, Sioux City, Iowa

- Undergraduate Laboratory Assistant, 1998–1989
- Undergraduate Research Assistant, 1987–1988

Publications

“Advanced Camera Matching Techniques and Human Factors Methodologies for Pedestrian Fall Analysis and Investigation**”,** Anne Mathias, Hana Chan, **D. H. Kruger**, Amber Stern, David Fortenbaugh, Rob Plichta Proceedings of the Human Factors and Ergonomics Society Annual Meeting 1–4 Copyright © 2025

“Industrial Tugger 3-Dimensional Convergence Accident Reconstruction Technology,” D.B. Brickman, **D.H. Kruger**, S.P. Loomis, K.B. Zakutansky, J.S. McGillicuddy, B.A. Thibault, The XXXVIth Annual International Occupational Ergonomics and Safety Conference, Denver CO, August 5-6, 2024

“Concrete Buggy Operator Presence Control 3-Dimensional Convergence of Accident Reconstruction Technology,” D.B. Brickman, E.H. Knox, J.T. Eganhouse, **D.H. Kruger**, R.A. Brewster, T.C. Lueck, M.D. Bauer, The XXXIIIrd Annual International Occupational Ergonomics and Safety Conference Virtual Conference, September 16-17, 2021

“Videogrammetry in Vehicle Crash Reconstruction with a Moving Video Camera,” E.J. Manuel, R.A. Mink, **D.H. Kruger**, SAE Technical Paper, 2018-01-0532, 2018, doi:10.4271/2018-01-0532, A

“Tanker Truck Loading Platform Fall Protection Accident Reconstruction Analysis,” D.B. Brickman, E.H. Knox, **D.H. Kruger**, R.A. Brewster, and J.A. Lueck, XXIX Annual Occupational Ergonomics and Safety Conference, Seattle, WA, 2017.

“Minimizing the Sound Power Radiated by a Cube as a Function of the Size of Constrained Layer Damping Patches,” **D.H. Kruger** and J.A. Mann, Journal of the Acoustical Society of America, Vol. 105, No. 3, 1999.

“Placing Constrained Layer Damping Patches Using Reactive Shearing Structural Intensity Measurements,” **D.H. Kruger**, J.A. Mann, and T. Wiegandt, Journal of the Acoustical Society of America, Vol. 101, No. 4, 1997.

“Radiated Sound Energy of a Fluid-Loaded Cylinder as a Function of Force Time Duration and Multiple Pulse Time Spacing,” **D.H. Kruger** and J.A. Mann, Journal of the Acoustical Society of America, Vol. 96, No. 1, 1996.

“The Development of a Passive Protective Device for the Elderly to Prevent Hip Fractures from Accidental Falls,” **D.H. Kruger**, M.S. Sellberg, and J.C. Huston, Advances in Bioengineering, ASME Vol. BED-22, 1992.

Presentations

“Industrial Tugger 3-Dimensional Convergence Accident Reconstruction Technology,” D.B. Brickman, **D.H. Kruger**, S.P. Loomis, K.B. Zakutansky, J.S. McGillicuddy, and B.A. Thibault, XXXVI Annual International Occupational Ergonomics and Safety Conference, Denver, CO, August 5–6, 2024.