



Professor Kaspar J. Willam

See:

<http://bechtel.colorado.edu/~willam/home.html>

<http://ceae.colorado.edu/faculty-staff/emeritus-faculty/kasper-willam/>

<http://www.cive.uh.edu/faculty/willam>

<http://www.egr.uh.edu/news/0910/?e=nae>

<http://www.nae.edu/MembersSection/Directory20412/30846.aspx>

<http://www.worldcat.org/identities/lccn-n84-199674>

<http://65.54.113.26/Author/18105780/kasper-willam>

http://en.wikipedia.org/wiki/Willam-Warnke_yield_criterion

[http://openlibrary.org/authors/OL4250543A/Kasper J. Willam](http://openlibrary.org/authors/OL4250543A/Kasper_J._Willam)

Professor of Civil Engineering
University of Colorado at Boulder

After completing his undergraduate Dipl.-Ing. degree at the Technical University of Vienna, Austria, in 1964, Professor Willam continued his studies with graduate work at California State University San Jose and at the University of California Berkeley. In 1969 he received his Ph.D. degree with a dissertation on 'Finite Element Analysis of Cellular Structures'. Upon returning to Europe in 1970, he directed a large-scale R&D project at the University of Stuttgart to develop the 3-dim finite element code SMART for the analysis and design of prestressed concrete reactor vessels. This provided an opportunity to focus on computational aspects of thermomechanical analysis of materials and structures. In 1980 he was promoted to Universitätsdozent for

Structural Mechanics in Aeronautical and Aerospace Engineering with a habilitation thesis on ‘Finite Element Discretization of Quasistatic Problems in Space and Time’. In 1981 he was appointed Professor of Civil Engineering at the University of Colorado Boulder, where he was and is still teaching a variety of undergraduate and graduate courses in structural mechanics and materials. In 1988 he accepted the responsibility to chair the Institute of Mechanics at the University of Karlsruhe, Germany, from which he resigned in 1990 to return to CU-Boulder. He has directed major research projects on triaxial material models and localized failure analysis with the support of the NSF, AFOSR, WES, DFG, FHWA and CASI. Among other awards, he is the recipient of the prestigious Nathan M. Newmark Medal of ASCE [2003], the Research Award of the Alexander von Humboldt Foundation, Germany [1998], and the Science Award of the Japan Society for the Promotion of Science, Japan [1992]. In 2004 he was inducted to the National Academy of Engineering (NAE Class of 2004).

Professor Willam is a Fellow of ASCE, ASME and USACM and a member of several committees on computational mechanics and nonlinear and inelastic material behavior. From 1994-2000 he chaired the ASCE/ACI 447 Committee on Finite Element Analysis of Reinforced Concrete Structures. He is a member of the editorial board of several international journals and the author of more than 160 publications, and over 140 invited lectures and presentations at professional meetings. He has organized sessions and symposia at the annual conventions of ASCE, ACI, ASME and USACM. Over the past 25 years, he was involved in developing a number of workshops and panels at international conferences. Recently he was instrumental in hosting USNCCM99, the 5th National Congress for Computational Mechanics, at the University of Colorado Boulder, August 4-6, 1999, convening 700 participants from 27 countries. Recently he chaired the Local Organizing Committee of the Fifth International Conference on Fracture Mechanics of Concrete and Concrete Structures, FramCoS-5, April 12-16, 2004 in Vail Colorado.

The data below list his technical accomplishments:

Professional Experience:

- Professor of Civil Engineering, University of Colorado Boulder, 1981 - present.
- Professor and Chair of the Institute for Mechanics, University of Karlsruhe, Germany, 1988 - 1990.
- University Docent for Structural Mechanics, Department of Aeronautical & Aerospace Engineering, University of Stuttgart, Germany, 1980 - 1981.
- Group Leader at the Institute for Statics and Dynamics, University of Stuttgart, Germany, 1970 - 1981.
- Research Assistant and Research Associate in Structural Engineering and Structural Mechanics, University of California Berkeley, 1967 - 1970.
- Teaching Assistant in Structural Engineering and Structural Mechanics, University of California Berkeley, 1966 - 1967.
- Part-Time Instructor, California State University San Jose, 1964-1966.

Education:

- Dr.-Ing. habil. degree, 1980, University of Stuttgart, Germany (Prof. John H. Argyris). Habilitation: FiniteElementDiscretizationofQuasistaticProblemsinSpaceandTime(ingerman).
- Ph.D. degree, 1969, University of California Berkeley, California (Prof. Alex S. Scordelis). Dissertation: Finite Element Analysis of Cellular Structures.
- M.S. degree, 1966, California State University San Jose, California (Prof. William Lorell). M.S. Thesis: An Experimental Study of Combined Torsion and Bending in Reinforced Concrete Beams.
- Dipl.-Ing. degree, 1964, Technical University Vienna, Austria.

Honors and Awards:

- Member of the National Academy of Engineering (NAE Class of 2004).
- Nathan M. Newmark Medal Fellow of the American Society of Civil Engineers, ASCE, 2003.
- Fellow of the American Society of Civil Engineers, F. ASCE, 2001.
- Fellow of the American Society of Mechanical Engineers, F. ASME, 1999.
- AvH Fellow, Alexander von Humboldt Research Award, Bonn, Germany, 1998
- JSPS-Fellow, Japanese Society for the Promotion of Science, Tokyo, 1992.
- Research Development Award, CEAE-Department, University of Colorado Boulder, 1986.
- Fulbright Travel Award, US-Fulbright Commission, Vienna, 1964.

Scientific and Professional Societies:

- National Academy of Engineering, NAE
- American Society of Civil Engineering, ASCE
- American Society of Mechanical Engineers, ASME
- American Concrete Institute, ACI
- Gesellschaft für Angewandte Mathematik und Mechanik, GAMM
- American Academy of Mechanics, AAM
- US Association of Computational Mechanics, USACM
- Intl. Association for Fracture Mechanics of Concrete Materials and Structures, IAFraMCoS

Professional Committees:

- ASCE-EMD: Committee for Inelastic Behavior, Member
- ASCE-ACI 447: Finite Element Analysis of Reinforced Concrete Structures, Member
- ASME-AMD/MD: Joint Committee on Constitutive Equations, Member
- ASME-AMD: Committee on Computing in Applied Mechanics, Member
- USACM: Committee on Computing in Applied Mechanics, Executive Committee Member

Editorial Board Member of International Journals:

- Advisory Editor, Computer Methods in Applied Mechanics and Engineering, Elsevier Science S.A., Amsterdam.
- Editorial Advisory Board, Engineering Computations, Intl. J. for Computer-Aided Engineering and Software, MCB University Press Ltd, Bradford, England.
- Editorial Board, Numerical and Analytical Methods in Geomechanics, Incorporating Mechanics of Cohesive-Frictional Materials, John Wiley & Sons, Chichester, U.K.
- ASME-WAM'84, AMD-Symposium on Constitutive Equations, Micro, Macro- and Computational Aspects, Dec. 9-13, 1984, New Orleans, (K. Willam ed.), ASME-AMD Vol. G00274, New York, 1984.
- ASME-WAM'87, AMD-Symposium on Advances in Inelastic Analysis, (with N. Rebelo and S. Nakazawa), Dec. 12-16, 1987, Boston, (S. Nakazawa, N. Rebelo and K. Willam, eds.), ASME-AMD Vol. 88, New York, 1987.
- WCCM II-World Congress for Computational Mechanics, Symposium on Computational Failure Mechanics, Aug. 27-31, 1990, University of Stuttgart, Special Volume of Comp. Meth. Appl. Mech. Engng. (Guest Editor), North-Holland, Amsterdam, Vol. 90, 1991.
- USNCCM99-5th US National Congress on Computational Mechanics, Book of Abstracts (A. Carosio, P. Smolarkiewicz, J. Yang and K. Willam, eds.), University of Colorado, Boulder Aug. 4-6, 1999.
- 5th US National Congress on Computational Mechanics, Plenary and Selected Keynote Lectures, (K. Willam

and S. Sture, Guest Editors), Special Volume of Intl. J. Num. Meth. Engrg., Vol. 52 Number 1-2, 10-20 September 2001.

- ACI Special Publication SP-205, “Finite Element Analysis of Reinforced Concrete Structures”, American Concrete Institute, Farmington Hills, MI (K. Willam and T. Tanabe, eds.), 2001, p. 399.
- FraMCoS-5 Proceedings, Vol. 1 and 2, “Fracture Mechanics of Concrete Structures”, American Concrete Institute, Farmington Hills, MI (V.C. Li, C.K.Y. Leung, K.J. Willam and S. Billington, eds.), 2004, p. 1195.
- Special Issue on “Computational Modeling of Concrete”, Computer Methods in Applied Mechanics and Engineering, Jirasek, M. Carol, I. and Willam, K., (eds.), (2006), Vol. 195, Issue 52.
- Special Issue on “Fracture of Concrete Materials and Structures”, Intl. J. Engineering Fracture Mechanics, Leung, C.K.Y. and Willam, K., (eds.), (2007), Vol. 74., Issues 1-2.

Teaching Experience:

• Undergraduate Level:

- CVEN 2121: Analytical Mechanics I, Statics - Lecture Notes
- CVEN 3111: Analytical Mechanics II, Dynamics
- CVEN 3161: Mechanics of Materials I - Lecture Notes
- CVEN 4161: Mechanics of Materials II - Lecture Notes
- CVEN 3505: Structural Analysis
- CVEN 4525: Matrix Structural Analysis

• Graduate Level:

- CVEN 5161: Advanced Mechanics of Materials I - Lecture Notes
- CVEN 6161: Advanced Mechanics of Materials II
- CVEN 6525: Finite Element Analysis of Structures - Lecture Notes
- CVEN 6831: Special Topics in Plasticity and Elastic Degradation
- CVEN 7111: Dynamics of Structures
- CVEN 7141: Plates and Shells - Lecture Notes
- CVEN 7511: Computational Mechanics of Solids and Structures - Lecture Notes
- CVEN 7831: Special Topics in Solid Mechanics