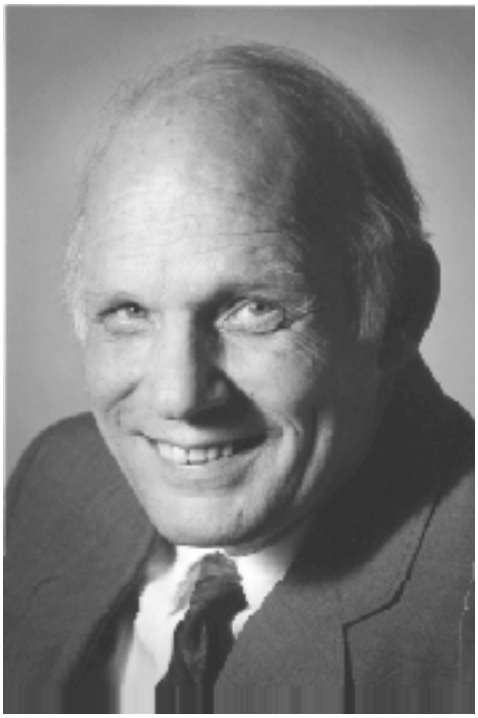

Professor Robert L. Taylor

Robert L. Taylor and Oleg Zienkiewicz at work

See:
http://www.ce.berkeley.edu/people/faculty/taylor
http://www.ce.berkeley.edu/~rlt/
http://www.ce.berkeley.edu/people/faculty/taylor/publications
http://www.ce.berkeley.edu/~rlt/presentations/rlt_venice.pdf
http://www.ce.berkeley.edu/projects/feap/
http://www.researchgate.net/profile/R_Taylor4

Emeritus from Department of Civil and Environmental Engineering
University of California, Berkeley, California, USA

Biographical Sketch:
Robert L. Taylor received his graduate training in the Department of Civil Engineering at the University of California, Berkeley (MS 1958 and PhD 1963). He was a member of the Structural Engineering, Mechanics and Materials (SEMM) faculty in the Department from 1963 to 1994. In 1994 he became emeritus professor and Professor in the Graduate School. Professor Taylor is a member of the U.S. National Academy of Engineering and the T.Y. and Margaret Lin Emeritus Professor of Engineering. [See the presentation, "My Fifty Years with Finite Elements, WCCM8/ECCOMAS 2008 Congress, 20 June – 4 July, 2008:
http://www.ce.berkeley.edu/~rlt/presentations/rlt_venice.pdf

Press Release by Dassault Systems dated December 13, 2006:
Robert L. Taylor Joins Dassault Systems as Corporate Fellow: Top researcher provides FEA expertise to the SIMULIA brand.

“Paris, France, and Providence, R.I. USA, December 13 2006 – Dassault Systèmes (DS) (Nasdaq: DASTY; Euronext Paris: #13065, DSY.PA), a world leader in 3D and Product Lifecycle Management (PLM) solutions, today announced that Robert L. Taylor has joined Dassault Systèmes as a Corporate Fellow, within the SIMULIA brand. SIMULIA is responsible for developing an open platform for the integration of multidisciplinary analysis as well as the Abaqus and CATIA Analysis applications. In this new role, Dr. Taylor will perform research to advance technology and methods for Abaqus finite element analysis (FEA) and multiphysics software. ‘There is a great tradition of research and development for advancing FEA methods and solvers within the Abaqus product family, and I am happy to be joining the effort,’ Taylor says. ‘While the simulation industry has progressed significantly over the years, there is still work to be done to account for new materials and applications. I am looking forward to collaborating with the largest R&D team in the world dedicated to developing new and improved FEA solutions.’ Taylor is an internationally recognized veteran of research into the mechanics of solids, computational mechanics, FEA methods, and FEA software. ‘Robert’s knowledge and experience in solid mechanics and computational mathematics will be a significant benefit to our customers and our business as we develop the broadest portfolio of unified and scalable simulation solutions,’ says Bruce Engelmann, chief technology officer, SIMULIA. Taylor received graduate training in the Department of Civil Engineering at the University of California, Berkeley (M.S. 1958, Ph.D. 1963). He was a member of the Structural Engineering, Mechanics and Materials faculty in the department from 1963 to 1994. In 1994 he became the T. Y. and Margaret Lin Emeritus Professor of Engineering and Professor in the Graduate School at the University of California, Berkeley. Taylor has authored or coauthored more than 200 scientific publications and has received numerous awards, including the Daniel C. Drucker Medal (2005) from the American Society of Mechanical Engineering, the Gauss-Newton Congress Medal (2002) from the International Association for Computational Mechanics, and the von Neumann Medal (1999) from the U.S. Association for Computational Mechanics. His well-known book, coauthored with O. C. Zienkiewicz, is essential reading for undergraduates, postgraduates, and professional engineers.”

Research Interests:
Mechanics of solids, computational mechanics, finite element methods, isogeometric methods, multi-scale methods, finite element software.

Selected Publications (Books):
O.C. Zienkiewicz and Robert Leroy Taylor, The finite element method for solid and structural mechanics, 5th? Edition, Butterworth-Heinemann, 2005

Zienkiewicz O.C., Taylor R.L. & Zhu J.Z. (2006). "The finite element method - It's basis and fundamentals". 6th edition, Elsevier.

Zienkiewicz, O.C., R.L. Taylor and P. Nithiarasu, "The Finite Element Method for Fluid Dynamics", Elsevier, 2006.

Finite Element Software:
• Taylor, R.L., "FEAP Version 8.3 Manuals" (User Programmer, Contact Theory, Installation, Example), June 2009.
• Taylor, R.L., "FEAP Version 8.2 Manuals" (User Programmer, Contact Theory, Installation, Example), January 2008.
• Taylor, R.L. and S. Govindjee, "FEAP Version 8.2 Parallel Manual", January 2008.

• Taylor, R. L., "FEAP Version 8.1 Manuals" (User Programmer, Contact, Theory, Parallel, Installation, Example), 2007.
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Selected Publications (Papers):

Dong, S. B., Pister, K. S., and Taylor, R. L., "On the Theory of Laminated Anisotropic Shells and Plates," Journal of the Aerospace Science, Vol. 29, Aug. 1962, pp. 969-975.

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Herrmann, L. R., R. L. Taylor and D. R. Green, "Finite Element Analysis for Solid Rocket Motor Cases", UCB/SESM Report No. 67/09, University of California, Berkeley, 1967.

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J.C. Simo (1), Peter Wriggers (2), Karl Schweizerhof (3) and R.L. Taylor (4)
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(2) Leibniz University, Hannover, Germany
(3) Karlsruhe Institute of Technology
(4) Structural Engineering and Structural Mechanics, Department of Civil Engineering, University of California, Berkeley, California, U.S.A.
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