TOD A LAURSEN, PROFESSOR OF CIVIL AND ENVIRONMENTAL ENGINEERING AND BIOMEDICAL ENGINEERING AND SENIOR ASSOCIATE DEAN FOR EDUCATION

Tod Laursen received his Ph.D. in mechanical engineering from Stanford University in 1992. His earlier degrees were an M.S. from Stanford in 1989 and a B.S. from Oregon State University in 1986. Before joining the Duke faculty in 1992, Dr. Laursen worked as a solid mechanics analyst at Lawrence Livermore National Laboratory from 1986 to 1992. He had obtained previous structural analysis experience while working for Boeing in 1985.

At Duke, Dr. Laursen teaches undergraduate courses in engineering computing and engineering science and teaches graduate courses in continuum mechanics, engineering analysis, finite element methods, and the use of finite element methods for the solution of nonlinear problems. His research activities fall largely under these same categories, with a special interest in the modeling of physical systems exhibiting contact and friction phenomena in the presence of large deformations, inelasticity, and other sources of nonlinearity. Applications for this work are to be found in such diverse settings as crashworthiness evaluation for automobiles, wear characterization, metal forming applications, and the geophysical description of slip propagation in fault zones.

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Representative Publications   (More Publications)

Upton, Maureen L. and Guilak, Farshid and Laursen, Tod A. and Setton, Lori A., *Finite element modeling predictions of region-specific cell-matrix mechanics in the meniscus*, Biomechanics and Modeling in Mechanobiology, vol. 5 no. 2-3 (2006), pp. 140 - 149 [s10237-006-0031-4] [abs].

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