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Selected Publications:

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J.C. Simo, Peter Wriggers, Karl Schweizerhof and R.L. Taylor, "Finite deformation post-buckling analysis involving elasticity and contact constraints", *International Journal for Numerical Methods in Engineering*, Vol. 23, No. 5, pp 779-800, May 1986

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Matzenmiller, A., and Schweizerhof, K., "Crashworthiness simulation of composite structures- a first step in Explicit Time Integration," *Non-linear computational mechanics- a state of art*, Springer Verlag, Newyork, 1991.

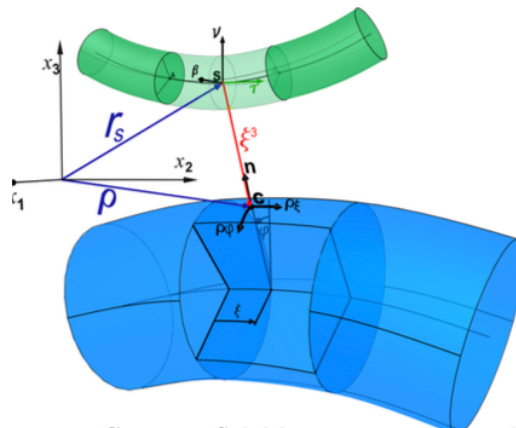


Figure 2: Curve-To-Solid beam contact algorithm

From: Karl Schweizerhof, et al., "A solid beam element for wire rope simulation with a special contact algorithm, 11th World Congress on Computational Mechanics (WCCM XI), Barcelona, Spain, 2014

Gebhardt H. and Schweizerhof K. (1993), "Interpolation of curved shell geometries by low order finite elements - Errors and modifications", Int. J. Numerical Methods in Engng., vol. 36, pp.287-302.

K. Schweizerhof, R. Hauptmann, T. Rottner, and M. Raabe. Silo buckling analyses considering nonuniform filling – dynamic versus static analyses using LS-DYNA. Proc. 5th Int. LS-DYNA Conf., Southfield, Michigan, 1998.

R. Hauptmann and K. Schweizerhof. A systematic development of solid-shell element formulations for linear and non-linear analyzes employing only displacement degrees of freedom. International Journal for Numerical Methods in Engineering, 42:49–69, 1998.

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Eduard Ewert, Karl Schweizerhof and Peter Vielsack, “Measures to judge the sensitivity of thin-walled shells concerning stability under different loading conditions”, Computational Mechanics, Vol. 37, No. 6, 2006, 507-522

E. Ewert, K. Schweizerhof. “Numerical Aspects in the Computation of Singular Points /Modes for Cylindrical Shells.” Procs. ANASS-Workshop, Sept. 26-28, 2007, Zagreb.

K. Schweizerhof, E. Ewert, “Stability and Sensitivity of Shell-Like Structures Considering Imperfections and Contact”, 8th. World Congress on Computational Mechanics (WCCM8) 5th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008) June 30 –July 5, 2008 Venice, Italy.