



Dr. John Austin Cottrell

See:

https://www.researchgate.net/scientific-contributions/63279450_JA_Cottrell

Biography:

J. Austin Cottrell received his CSEM Ph.D. from the University of Texas, Austin in 2007, where his research focus was isogeometric analysis. Since 2008 he has been with Citigroup developing relative-value trading models for equity options. He is currently based in London as Quantitative Analyst, Vice President for Citigroup Global Markets Ltd.

Formerly:

Institute for Computational Engineering and Sciences, The University of Texas at Austin

Selected Publications:

T.J.R. Hughes, J.A. Cottrell and Y. Bazilevs “Isogeometric analysis: CAD, finite elements, NURBS, exact geometry and mesh refinement”, *Comput. Methods Appl. Mech. Engrg.*, Vol. 194, pp 4135-4195, 2005

Y. Bazilevs, L. Beirao da Veiga, J. A. Cottrell, T. J. R. Hughes, and G. Sangalli, *Isogeometric Analysis: Approximation, Stability and Error Estimates for h-Refined Meshes*, *Math. Model. Method. Appl. Sci.*, vol. 6, pp. 1031-1090, 2006.

Cottrell J, Reali A, Bazilevs Y, Hughes TJR. Isogeometric analysis of structural vibrations. *Computer Methods in Applied Mechanics and Engineering* 2006; 195:5257–5297.

Y. Bazilevs, V. Calo, J.A. Cottrell, T.J.R. Hughes, A. Reali, and G. Scovazzi. Variational multiscale residual-

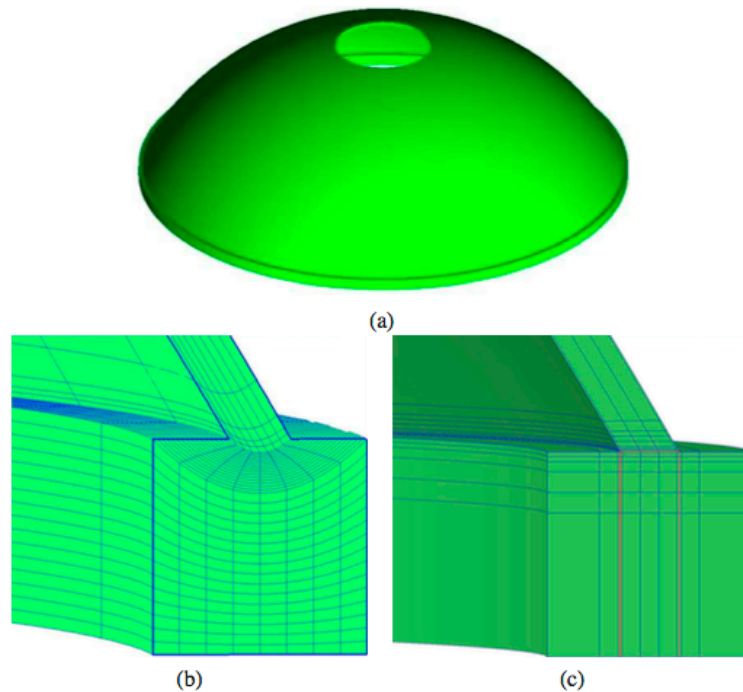


Figure 2.25: Multiple patches usually produce better quality meshes. (a) The stiffened shell of [38] can be modeled using a single NURBS patch. (b) Such a mapping produces severe mesh distortion that is unavoidable when using a single patch. (c) Allowing the shell and the stiffener to be modeled by different patches creates a much more natural mesh. Patch boundaries shown in red.

From: John Austin Cottrell, III, “Isogeometric analysis and numerical modeling of the fine scales within the variational multiscale method”, PhD dissertation, The University of Texas at Austin, 2007

based turbulence modeling for large eddy simulation of incompressible flows. Technical report, ICES, The University of Texas at Austin, 2007.

John Austin Cottrell, III, "Isogeometric analysis and numerical modeling of the fine scales within the variational multiscale method", PhD dissertation, The University of Texas at Austin, 2007

J.A. Cottrell, T.J.R Hughes, and A. Reali. Studies of refinement and continuity in geometry and mesh refinement. *Computer Methods in Applied Mechanics and Engineering*, 196:4160– 4183, 2007.

] Cottrell, J. A., Hughes, T. J. R., and Bazilevs, Y., *Isogeometric Analysis: Toward Integration of CAD and FEA*, Wiley–Blackwell, New York, 2009, pp. 19–68.

Y. Bazilevs, V.M. Calo, J.A. Cottrell, J.A. Evans, T.J.R. Hughes, S. Lipton, M.A. Scott, T.W. Sederberg, Isogeometric analysis using T-splines. *Comput. Meth. Appl. Mech. Engrg.* 199 (2010) 229–263