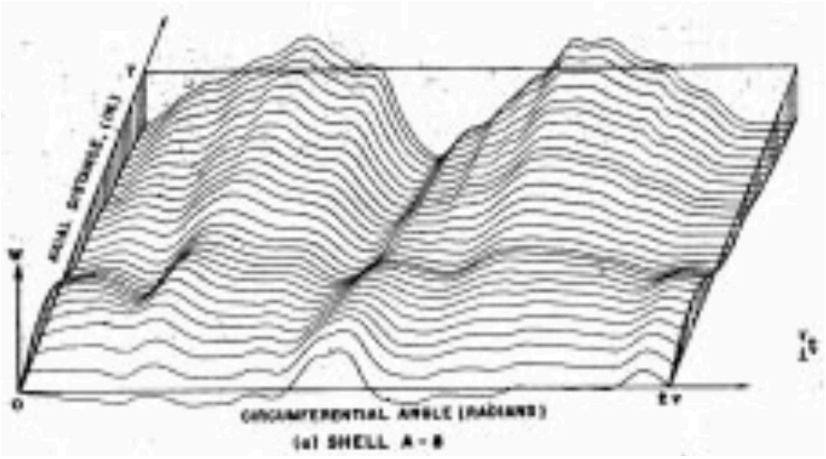

From: "Cylindrical Shell Buckling: A Characterization of Localization and Periodicity" by Hunt, Lord & Peletier, 2003

Professor Emeritus Giles W. Hunt

See:
http://www.bath.ac.uk/mech-eng/people/hunt/index.html
http://people.bath.ac.uk/ensgwh/
http://opus.bath.ac.uk/view/person_id/521.html
http://65.54.113.26/Author/12549222/giles-w-hunt
http://www.aipuniphy.org/Profile.bme/308904/Giles_W_Hunt

Emeritus Professor of Structural Mechanics
School of Mechanical Engineering
University of Bath

Research Interests:
Nonlinear statics and dynamics
General theory of stability and bifurcation
Buckling and Post-buckling of elastic, plastic and viscous structures
Application to structural and geological systems

Profile (From http://www.bath.ac.uk/mech-eng/people/hunt/index.html**):**

Giles Hunt is Emeritus Professor of Structural Mechanics in Mechanical Engineering. His interest in nonlinear mechanics started with the buckling of structures, and has grown over the years to embrace a number of other related and semi-related fields including composite aerostructures and structural geology.
Giles Hunt was educated in Canada and Australia before returning to Britain aged 17 at the start of the 1960s. He completed A-levels at a local technical college before progressing to University College London (UCL) to study for a degree in Civil Engineering. During this time was lucky to discover the excitement of research in a far-sighted final year research project, and he has remained excited by the prospect of discovery ever since.
He went to Imperial College London (ICL) for an MSc in Structural Engineering in 1968, then back to UCL for a PhD and 8 years as post-doctoral research assistant. He squared the circle by returning to Imperial College in 1978 as Lecturer, and was promoted to Reader in 1986. He finally came to the Department of Mechanical Engineering at Bath as Professor of Structural Mechanics in 1995.
Giles has authored and co-authored numerous papers, including 19 Royal Society publications, two books, and a number of edited volumes of various kinds. He has served on a number of editorial boards, including Philosophical Transactions of the Royal Society A and Proceedings of the Royal Society A.

Research (From http://www.bath.ac.uk/mech-eng/people/hunt/index.html**):**
Giles Hunt is a known authority on elastic buckling and post-buckling theory, stemming primarily from his early monograph (A General Theory of Elastic Stability, J.M.T.Thompson and G.W.Hunt, Wiley 1973), which is still frequently cited. He went on to link this general nonlinear approach with Catastrophe Theory as developed by mathematicians in the 1970s and beyond. This gave the work a much wider potential range of application than just thin elastic structures, and much of his research since that time has been geared towards this widening of applicability.
Giles Hunt's work is genuinely interdisciplinary, using results from nonlinear applied mathematics to contribute non-trivially to structural mechanics and engineering, while at the same time adding to mathematical knowledge by identifying and analysing important practical problems with underlying mathematical structure. He has interacted over the years with, amongst others: mathematicians, civil, mechanical, aeronautical and structural engineers, physicists and geologists. His publications, with a large number of different co-authors in a wide range of journals, reflect this interdisciplinary interest.
Recent research has been directed towards understanding fundamental concepts of nonlinear geometric instabilities in structural geology. This has led to new insights into the behaviour of both layered and granular media, based on simple linear elastic models for which just nonlinear geometry needs to be taken into account. Both the phenomenon of kink-banding in layered materials, and that of shear banding in granular media, appear to fall into this framework. The outcome is a nonlinear modelling process that gives good insight into how these complex instabilities develop, and can compare well, both qualitatively and quantitatively, with experiments. Much of the same modelling process is also being transferred directly to another form of layered structure, that of carbon-fibre composite structures, as used in the modern aerospace industry, both with and without the presence of delaminations.

Selected Publication:
G.W. Hunt, Centre for Nonlinear Mechanics University of Bath, Bath BA2 7AY, UK
G.J. Lord, Department of Mathematics, Heriot-Watt University, UK
M.A. Peletier, Centrum voor Wiskunde en Informatica PO Box 94079, 1090 GB Amsterdam, NL, "Cylindrical Shell Buckling: A Characterization Of Localization And Periodicity", Discrete And Continuous Dynamical Systems–Series B Vol. 3, No. 4, November 2003, pp. 505–518.