



Professor Phillippe G. Young

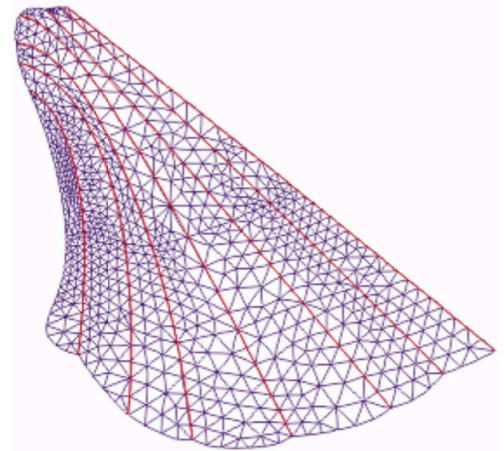


Figure 8. Top view of finite element mesh of hind wing of *Schistocerca gregaria*.

From: Herbert, R.C., Young, P.G., Smith, C.W., Wootton, R.J., Evans, K.E.:
The hind wing of the desert locust (*Schistocerca gregaria* Forskal), III. A finite element analysis of a deployable structure. *J. Exp. Biol.* **203**, 2945–2955 (2000)

See:

<http://emps.exeter.ac.uk/engineering/staff/pgyoung>

<https://emps.exeter.ac.uk/engineering/staff/pgyoung/publications>

https://www.researchgate.net/profile/Philippe_Young

Synopsys,Ltd and College of Engineering, Mathematics and Physical Sciences
University of Exeter, Devon, UK

Summary:

Professor Philippe G. Young holds the Synopsys Chair of Computational Mechanics within the College of Engineering, Mathematics, and Physical Sciences. Professor Young has been with the University of Exeter for 22 years, beginning as a Lecturer in Engineering in 1996. Prior to this, he held positions as a Research Fellow at the Institute of Sound and Vibration Research (ISVR) in Southampton and as a Post-Doctoral Fellow at the University of Western Ontario in Canada, where he was also awarded his PhD. In 2013 Professor Young won Lecturer of the Year at the University of Exeter Teaching Awards, voted for by the students. In addition to a wide range of EPSRC, EU and TSB grants, Professor Young was awarded a five year EPSRC Advanced Research Fellowship and a Royal Society Leverhulme Research Fellowship. Since 2018, Professor Young has been Guest Professor at the China University of Geosciences (Wuhan), China. In 2000 Professor Young founded the company Simpleware Ltd. through research he was carrying out as an Advanced Fellow at the University. Simpleware is a high technology spin-off company from the University of Exeter. In 2016 Simpleware was acquired by Synopsys, Inc., one of the world's largest software companies. Professor Young is the Synopsys R&D Director for Simpleware software, used for 3D image processing (from MRI, CT, micro-CT, for example) and model generation for CAD, 3D Printing, and CAE applications. As Simpleware Ltd., the company won consecutive Queen's Awards for Enterprise in 2012 and 2013, recognising efforts in innovation and growing overseas business. Other awards include the Praxis Unico Business Impact – Aspiring Award in 2012 and an Institute of Physics (IOP) Innovation Award in 2013.

Selected Publications:

Young PG, Dickinson SM (1993) On the free flexural vibration of rectangular plates with straight or curved internal line supports. *J Sound Vib* 162(1):123–135.

Young, P. G. & Dickinson, S. M. (1993) On the free vibration of thin isotropic and rectangularly orthotropic plates involving curved boundaries. *Journal of Sound and Vibration*, 165(3), 511-526

Yuan, J., Young, P.G., Dickinson, S.M.: Natural frequencies of circular and annular plates with radial or circumferential cracks. *Comput. Struct.* Vol. 53, 327, (1994). [https://doi.org/10.1016/0045-7949\(94\)90205-4](https://doi.org/10.1016/0045-7949(94)90205-4)

P.G. Young and S.M. Dickinson, "Further studies on the vibration of plates with curved edges, Including complicating effects", *Journal of Sound and Vibration*, Vol. 177, No. 1, pp 93-109, 13 October 1994

P.G. Young and S.M. Dickinson, "Free vibration of a class of solids with cavities", *International Journal of Mechanical Sciences*, Vol. 36, No. 12, pp 1099-1107, December 1994

P.G. Young and S.M. Dickinson, "Vibration of a class of shallow shells bounded by edges described by polynomials Part I: Theoretical approach and validation", *Journal of Sound and Vibration*, Vol. 181, No. 2, pp 203-214, 23 March 1995

P.G. Young and S.M. Dickinson, "Vibration of a class of shallow shells bounded by edges described by polynomials Part II: Natural frequency parameters for shallow shells of various different planforms", *Journal of Sound and Vibration*, Vol. 181, No. 2, pp 215-230, 23 March 1995

P.G. Young and S.M. Dickinson, "Free vibration of a class of homogeneous isotropic solids", *J. Appl. Mech.*, Vol. 62, No. 3, pp 706-708, September 1995

Jiang, H., Young, P.G. and Dickinson, S.M. (1996), "Natural frequencies of vibration of layered hollow spheres using exact three-dimensional elasticity equations", *J. Sound Vib.*, 195, 155-162.

Philippe Young, J. Yuan and S. Dickinson, "Three-dimensional analysis of the free vibrations of rectangular plates with depressions, grooves or cut-outs", *Journal of Vibration and Acoustics*, Vol. 118, April 1996

P.G. Young and S.M. Dickinson, "Natural frequencies of vibration of a class of solids composed of layers of isotropic materials", *International Journal of Mechanical Sciences*, Vol. 29, No. 1, pp 97-104, January 1997

Herbert, R.C., Young, P.G., Smith, C.W., Wootton, R.J., Evans, K.E.: The hind wing of the desert locust (*Schistocerca gregaria* Forskal), III. A finite element analysis of a deployable structure. *J. Exp. Biol.* 203, 2945–2955 (2000)

P.G. Young, Finite element corroboration of an analytical model to predict the response of the human head to impact, Presented at the Fifth International Symposium on Computer Methods in Biomechanics and Biomedical Engineering—BioRome Meeting, Rome, Italy, 2001.

P.G. Young, S.R. Diaz, Numerical simulation of the response of the human head to impact using a three dimensional finite element model derived from a medical imaging scan. Presented at the Fifth International Symposium Computer Methods in Biomechanics, Biomedical Engineering—BioRome Meeting, Rome, Italy, 2001.

P.G. Young, Aparametric study on the axi-symmetric modes of vibration of multi-layered spherical shells with liquid cores of relevance to head impact modelling, *Journal of Sound and Vibration* 256 (4) (2002) 665–680.

P. G. Young, An Analytical Model to Predict the Response of Fluid-Filled Shells to Impact – a Model for Blunt Head Impacts, *Journal of Sound and Vibration*, Vol. 267, 2003, pp. 1107–1126.

R.J. Wootton, R.C. Herbert, P.G. Young and K.E. Evans, "Approaches to the structural modeling of insect wings", *Phil. Trans. R. Soc. Lond. B*, Vol. 358, pp 1577-1587, 2003

B. Notarberardino, P. Young, B. Walker, A. Abdul-Aziz and G. Seidler, "Image based simulation of large strain deformation of open celled foams", *Materials Evaluation*, January 2008

Ali Abdul-Aziz, G. Abumeri, Mobit Garg and P.G. Young, "Structural Evaluation of a nickel based super alloy metal foam via NDE and finite element", *Proceedings of SPIE – The International Society for Optical Engineering*, May 2008

P.G. Young, T.B.H. Beresford-West, S.R.L. Coward, B. Notarberardino, B. Walker and A. Abdul-Aziz, "An efficient approach to converting three-dimensional image data into highly accurate computational models", *Phil. Trans. R. Soc. A*, Vol. 366, pp 3155-3173, 2008

P. Young, V. Bui Xuan and D. Raymont, "Mesh generation and computational modeling of biomedical image data", IV European Conference on Computational Mechanics, Paris, France, May 16-21, 2010

Ahmed Hussein, Liang Hao, Chunze Yan, Richard Everson and Philippe Young, "Advanced lattice support structures for metal additive manufacturing", *Journal of Materials Processing Technology*, Vol. 213, pp 1019-1026, 2013

David Harman, Philippe G. Young, Ross Cotton, Bence Gerber, Chris Quan, Thierry Marchal, Nithyanand Kota, Alan Leung, Amit Bachi and Siddiq Qidwai, "Reducing the risk of concussion through personalized helmet design", publisher is not identified in the pdf file, December 2016