



**Dr. Amit Patil**

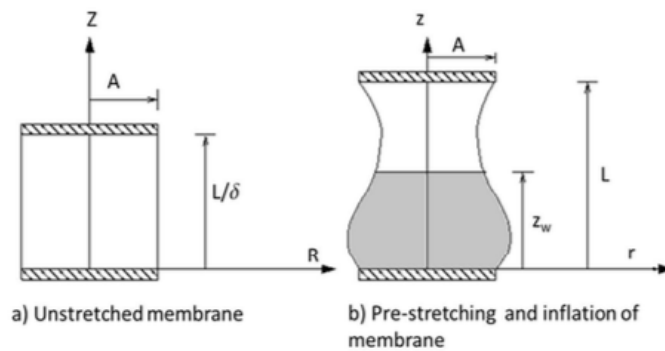


Figure 1: Schematic representation of a fluid-loaded cylindrical membrane during inflation.

From: Amit Patil, Arne Nordmark and Anders Eriksson, "Instability investigation on fluid-filled pre-stretched cylindrical membranes", Proceedings of the Royal Society A, Vol. 471, 20150016, 2015

See:

[https://www.mech.kth.se/mech/info\\_staff.jsp?ID=358](https://www.mech.kth.se/mech/info_staff.jsp?ID=358)

<https://se.linkedin.com/in/amit-patil-8a206a24>

<https://scholar.google.se/citations?user=E-6Z5wUAAAAJ&hl=en>

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### Education:

Licentiate, March 2015 Royal Institute of Technology, KTH, Stockholm, Sweden; Thesis: "Inflation Mechanics of Hyperelastic Membranes".

M.Tech. in Mechanical Systems Design, 2010–2012 Indian Institute of Technology Kharagpur, Kharagpur, West Bengal, India; Thesis: "Nonlinear Inflation Analysis of Elastomeric Circular Membrane: Finite Deformation Model"

B.E. in Mechanical Engineering, 2005–2009, Government College of Engineering, Karad, Maharashtra, India

### Selected Publications:

Patil A, DasGupta A (2013) Finite inflation of an initially stretched hyperelastic circular membrane. *Eur J Mech A/Solids* 41:28–36

Amit Patil, Amol Kolhe, Abdul Sayeed and AW Shaikh, "Review of Buckling in Various Structures Like Plate & Shells", *International Journal of Research in Engineering and Technology*, Vol. 3, No. 4, pp 396 – 402, April 2014

Amit Patil, Arne Nordmark and Anders Eriksson, "Finite inflation of fluid-filled pre-stretched cylindrical membranes", 27th Nordic Seminar on Computational Mechanics (NSCM-27), A. Eriksson, A. Kulachenko, M. Mihaescu and G. Tibert (editors), KTH, Stockholm 2014

Amit Patil, Arne Nordmark and Anders Eriksson, "Free and constrained inflation of a pre-stretched cylindrical membrane", *Proceedings of the Royal Society A*, Vol. 470, 20140282, 25 June 2014

Amit Patil, Arne Nordmark and Anders Eriksson, "Instability investigation on fluid-filled pre-stretched cylindrical membranes", *Proceedings of the Royal Society A*, Vol. 471, 20150016, 2015

Amit Patil, Arne Nordmark and Anders Eriksson, "Wrinkling of cylindrical membranes with non-uniform thickness", *European Journal of Mechanics – A/Solids*, Vol. 54, pp 1-10, November-December 2015

Patil A, DasGupta A, Eriksson A (2015) Contact mechanics of a circular membrane inflated against a soft adhesive substrate. *Int J Solids Struct* 67:250–262.

Patil A, DasGupta A (2015) Constrained inflation of a stretched hyperelastic membrane inside an elastic cone. *Meccanica* 50(6):1495–1508

Amit Patil, Arne Nordmark and Anders Eriksson, "Instabilities of wrinkled membranes with pressure loadings", *Journal of the Mechanics and Physics of Solids*, Vol. 94, pp 298-315, September 2016  
Anders Eriksson, Arne Nordmark, Amit Patil and Yang Zhou, "Parametric stability investigations for hydrostatically loaded membranes", *Computers & Structures*, Vol. 174, pp 33-41, October 2016