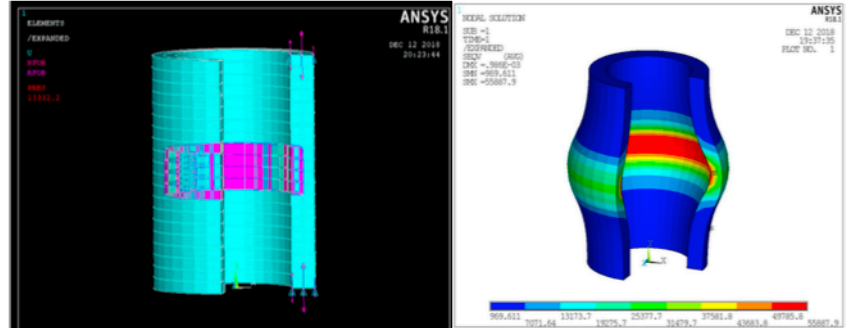




Professor Mohammad Talha



In this study, finite element modeling of artery wall of Yeoh material with internal pressure acts only on a specific area is done. Here we considered this study because in case of the presence of the plaque in artery wall internal pressure in that specific will be considerably more. This simulation represents an artery wall with plaque. Simulation of the same done here in this study and observed the convergence of the result. The inner diameter and thickness are 4 mm and 0.8 mm respectively. Both ends of the cylindrically shaped artery wall are constrained in the y-direction. An internal pressure of 100 mmHg is applied to the selected area which is one-fifth of the total internal area. Yeoh material constants are taken as $C_{10}=3550$ Pa, $C_{20}=14492.5$ Pa.

From: Pradeep Kumar, Wasim T. Salih and Mohammad Talha, “Finite element modeling and analysis of coronary artery wall with plaque”, First National Conference on Advances in Mechanical Engineering (NCAME), NIT Delhi, 2019

See:

<http://se.iitmandi.ac.in/facprofile.php?user=talha>

https://www.researchgate.net/profile/Mohammad_Talha5

https://scholar.google.co.in/citations?user=xTpfK_AAAAAJ&hl=en

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<https://talhaiit.weebly.com/bio-sketch.html>

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Biography:

Dr. Mohammad Talha obtained PhD in Aerospace Engineering from the Indian Institute of Technology, Kharagpur in 2012, under the guidance of Professor B N Singh in the area of functionally graded materials and structures. In the doctoral thesis he has studied the nonlinear deterministic and stochastic structural behavior of functionally graded plates based on the modified higher order plate model. Dr. Talha has received the prestigious National doctoral fellowship from the Government of India for doing doctoral degree at IIT Kharagpur. He obtained his Bachelor and Master degree in Mechanical Engineering from Aligarh Muslim University, Aligarh in the year 2003 and 2006, respectively.

Education:

PhD in Aerospace Engineering from the Indian Institute of Technology, Kharagpur, 2012
Masters in Mechanical Engineering, (Machine Design), AMU, Aligarh, 2006

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Research Interests:

Computational solid mechanics; Composite structures; Functionally graded materials; Imperfection sensitivity

Selected Publications:

- Pradeep Kumar, Wasim T. Salih and Mohammad Talha, “Finite element modeling and analysis of coronary artery wall with plaque”, First National Conference on Advances in Mechanical Engineering (NCAME), NIT Delhi, 2019
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