

Title: Pulsatile flow of biviscous fluid through a tube of varying cross-section

Link: <https://www.worldscientific.com/doi/10.1142/S0217984923410051>

The screenshot shows the top portion of a web browser displaying the article page. The browser's address bar shows the URL [worldscientific.com/doi/10.1142/S0217984923410051](https://www.worldscientific.com/doi/10.1142/S0217984923410051). The World Scientific logo is visible in the top left, and navigation links for Search, My Cart, Sign in, and Institutional Access are in the top right. A dark blue navigation bar contains links for Subject, Journals, Books, Major Reference Works, Resources For Partners, Open Access, About Us, and Help. A 'Cookies Notification' banner is present, with an 'I Agree' button. The article title 'Pulsatile flow of biviscous fluid through a tube of varying cross-section' is highlighted in blue. Below the title, the authors are listed: Vedyappan Govindan, Xiao Xin, N. Subashini Narayanamoorthy, P. Geetha, S. M. Chithra, C. T. Nagaraj, M. Premkumar, and A. Jyothi Bala. The DOI link and citation information are also visible. A 'PDF/EPUB' button and 'Tools', 'Share', and 'Recommend To Library' options are located below the article information. On the right, a sidebar shows the journal cover 'Modern Physics Letters B' and navigation options for Figures, References, Related, and Details.

<https://www.worldscientific.com> **Abstract**

This screenshot shows the abstract section of the article page. The layout is similar to the previous screenshot, with the navigation bar and journal information visible. The 'Abstract' section is the main focus, containing the following text:

In this paper, a pulsatile flow of a biviscous fluid in a circular tube of varying cross-section has been considered for investigation. The study helps to draw the characteristics of blood, the pressure drop and the wall shear stress on the inner wall of small blood vessels and capillaries where suction/injection velocity arises and Reynolds number is very low. The effects of Reynolds number, apparent viscosity coefficient and leakage parameter on the streamlines, pressure drop and wall shear stress have been discussed and shown graphically for suction and injection, respectively. The wall of the tube is supposed to be permeable and a normal velocity of the fluid at the wall is prescribed to consider the fluid exchange across the wall. Both analytic and numerical solutions are given. Using the perturbation technique, we analyze the problem for low Reynolds numbers and small oscillation amplitude. Lastly, the simulations are given to demonstrate the effectiveness and excellent tracking