

Call for Papers: Special Issue on ‘*Flow in collapsible tubes or over compliant surfaces for biomedical applications*’

Communications in Numerical Methods in Engineering

Communications in Numerical Methods in Engineering will publish a special issue on ‘Flow in collapsible tube or over compliant surface for biomedical applications’. The Guest Editors for this issue will be Dr X. Y. Luo from the University of Glasgow, Department of Mathematics, and Dr C. Davies from the Cardiff University, School of Mathematics.

There are many physiological examples of compliant tubes, which collapse when the intramural pressure difference falls below a critical value. These can be veins above the heart, arteries under a cuff, large airways in forced expiration, urethra during micturition, to mention just a few. More generally there are many biomechanical, biological examples of external and internal flows past highly compliant boundaries, for example, mechanics of snoring, pressure propagation in cerebrospinal fluid, hydrodynamics of dolphins and other animals, drag reduction, process engineering, structure-borne sound. The underlying physical phenomena, mathematical and numerical modelling have much in common with flow in collapsible tubes. This Special Issue aims to provide a glimpse of the rich research activities that are being undertaken in this area. Although most of the papers in this issue are on numerical modelling, some interesting and relevant experimental and analytical studies are also included.

We invite the, original papers and high-quality overviews on all the relevant topics including but not limited to:

- Flow in collapsible channels and tubes
- External and internal flows past compliant boundaries
- Instabilities of flows in or over compliant surfaces
- Biological applications

Completed papers should conform to the journal’s style and according to the instructions for authors which can be found on the journal’s homepage, under ‘For Authors’. <http://www3.interscience.wiley.com/cgi-bin/jabout/5902/ForAuthors.html>.

Papers have to be submitted online via the journal’s homepage at the URL above, under ‘Online Submission’. Authors must initially select Dr Perumal Nithiarasu as the Submitting Editor. Each submission must be clearly identified as a submission for this special issue and the special issue code, FBA, must be entered in the Special Issue Title field, when requested. Publication will take place according to the following timetable:

Manuscripts due: 15 May 2008
First review completion: July 2008
Anticipated publication date: End of 2008.