

## **ANALYTIC SOLUTIONS OF NON-NEWTONIAN PULSATILE FLOWS**

SEAN MCKEE

*Mathematics Department, Strathclyde University*

26 Richmond St., Glasgow G1 1XH, Scotland

E-mail: [s.mckee@strath.ac.uk](mailto:s.mckee@strath.ac.uk)

Analytic solutions are developed for a pulsatile Oldroyd B fluid in a circular pipe and annulus. This general solution then admits Maxwell flow as a special case which in turn may be regarded a generalization of Newtonian flow. This work was motivated by the early work of Womersley who was interested in pulsatile blood flow.