JOURNAL OF NON-NEWTONIAN FLUID MECHANICS

The journal will appeal to people working on fundamental developments in the rheological sciences and applications on both the macroscopic and microscopic scale.

Subjects considered suitable for the journal include the following (not necessarily in order of importance):

(1) The development of rheological equations of state for non-Newtonian liquids from both a continuum and microstructure starting point, but the outlook will always be practical in the sense that abstract developments with no hope of application will not be welcomed.

(2) The use of rheological equations of state in the solution of meaningful flow problems involving one or more fluid phases. Analytic and/or numerical solutions would be in order. These should be problems which involve the equations of continuity and motion and energy in a non trivial way.

(3) Experimental work associated with complex fluids, including
  (i) confirmation or otherwise of predictions from rheological equations of state developments and the confirmation of predictions from the solved flow problems
  (ii) novel flow situations which would suggest the need for further analytical work
  (iii) rheometry
  (iv) practical situations of flow which are in need of systematic theoretical and experimental research. Such issues and developments commonly arise, for example, in the polymer processing, petroleum, pharmaceutical, biomedical and consumer product industries. However, this list is meant to be representative, not exhaustive.

(4) Problems involving heat and mass transfers and mixing in flowing non-Newtonian liquids.

(5) Instabilities, unsteady and turbulent or chaotic flow characteristics in non-Newtonian fluids.