Special Issue

Recent Advances in Hydrodynamics and Magnetised Fluids

Message from the Guest Editor

Magnetic fluids are well known to be a colloidal suspension of various delicate particles of a solid ferromagnetic material in a transporter fluid, such as hydrocarbon, water, ester, and fluorocarbon. A most significant characteristic is that the fluid that can respond to the magnetic field. This feature is an outcome from the magnetic body strength occurring in magnetic field. It is the presence of these synthetic substances that produces the exploration of magnetic fluid dynamics possible. There are two obvious ways to create a magnetic fluid: size diminishing of chemical precipitation of small particles, coarse material. Size decrease has been achieved by electrolysis, sparkle evaporation–condensation, and grinding. The fluid dynamics of magneto-fluids vary from common fluids in that strains of magnetic principles manifest and, unlike in magnetohydrodynamics, the requirement is not electrical currents. Magnetic fluid motives the nonmagnetic fluid in the existence of tangential applied field.

Guest Editor

Prof. Dr. Ahmed Rashad

Department of Mathematics, Aswan University, Faculty of Science, 81528 Aswan, Egypt

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Fluids
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
fluids@mdpi.com

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Editor-in-Chief

Prof. Dr. D. Andrew S. Rees
Department of Mechanical Engineering, University of Bath, Bath BA2 7AY, UK

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