

NORIHAN MD. ARIFIN

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EXPERTISE

Prof. Dr. Norihan Md. Arifin major research areas include fluid mechanics and heat transfer with application to the thermal convection and boundary-layer theory, heat transfer in Newtonian and non-Newtonian as well as in fluid saturated porous media and nanofluids. She has contributed to more than 60 technical papers. Major sponsors of Norihan's research include the ScienceFund (Ministry of Science and Innovation of Malaysia (MOSTI), Research University Grant Scheme (RUGS) and Fundamental Research Grant Scheme (FRGS).

Current Research Interest

- **Marangoni convection in micropolar fluids and porous medium**

Convection has been the subject of many investigations as it is becoming important to the industry as in crystal growth, weld penetration and in coating process. The surface tension gradients that are responsible for Marangoni convection can be due to gradients of temperature and/or concentration. Our group focus on Marangoni convection in a horizontal fluid layer due to imposed temperature gradients.

- **Boundary layer problem in nanofluids**

A nanofluid is a colloidal mixture of nano-sized particles ($< 100\text{nm}$) in a base fluid. It is known that nanofluids can tremendously enhance the heat transfer characteristics of the original (base) fluid. Thus, nanofluids have many applications in industry such as coolants, lubricants, heat exchangers, microchannel heat sinks, etc. The study of nanofluids is still at its early stage and it seems very difficult to have a precise idea on the way the use of nanoparticles acts in heat transfer.

LINK TO POSTGRADUATE FIELD OF STUDY:

ADDITIONAL INFORMATION: