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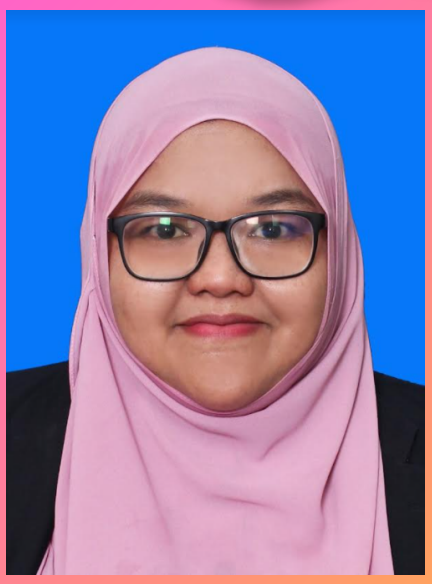
7/2022

INSPEM'S ONLINE WEEKLY SEMINAR

DATE : 18 FEBRUARY 2022 (FRIDAY)
TIME : 3.15 PM

zoom Meeting ID: 973 4661 1675



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Topic : Boundary Layer and Heat Transfer Studies on Hybrid Nanofluid Flow

Abstract

Traditional heat transfer fluids such as water, oil and ethylene glycol possess relatively low thermal conductivity, thus leading to problems in the productivity of engineering equipment such as heat exchangers and electronic devices. To overcome this disadvantage, there is a strong motivation to develop advanced heat transfer fluids with substantially higher conductivity. Suspending small solid particles in a fluid is an innovative way to increase the thermal conductivity of the fluid. The thermal conductivities of fluids with suspended particles are expected to be higher than that of other fluids. Nanofluids are a type of heat transfer fluid that contain a small number of nanoparticles (typically less than 100 nm in diameter) suspended uniformly and stably in a liquid. Hybrid nanofluids, on the other hand, are a relatively new type of nanofluid, and research on them is still limited. The hybrid nanofluid combines different composite materials with traditional base fluid (water, ethylene glycol). They can significantly increase the heat transfer performance of conventional working fluids in a wide variety of engineering and industrial applications. Therefore, this study focuses on boundary layer and heat transfer studies on hybrid nanofluid flow.

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