













工学系WINGS產学協創教育推進基金

第381回GMSI公開セミナー/第204回CIAiSセミナー/第126回WINGSセミナー

Deformation of bubbles in turbulence Associate Professor Rui Ni

Mechanical Engineering, The Johns Hopkins University

Date: Wednesday, March 22, 2023 15:00-16:00

Venue: Faculty of Engineering Bldg. 2, Room 31A

Abstract:

Mixing two immiscible fluids (gas-liquid or liquidliquid) in turbulence produces polydispersed droplets or bubbles that can freely deform, break, and coalesce while interacting with the surrounding turbulence. These processes are fundamentally important and practically relevant to multiple fields, including chemical emulsion, food science, nuclear thermal hydraulics, twophase heat transfer, and ocean and atmospheric science. In particular, deformation of bubbles is considered crucial to modulating effective lift and drag forces, reducing turbulent drag, and enhancing heat and mass transfer. In this presentation, I will discuss fundamental aspects of turbulent deformation, including experimental tests of key hypotheses and assumptions used in the classical Kolmogorov-Hinze framework and its limitations.





Registration https://forms.gle/hbVRrmCqv pm9UJVg6 Please register by Mar. 20.

東京大学大学院工学系研究科専攻間横断型教育プログラム 機械システム・イノベーション (GMSI) 主催:

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