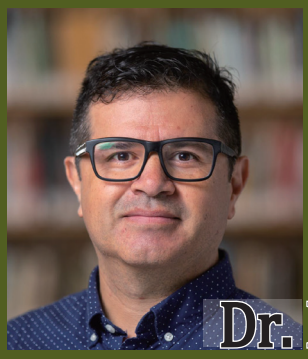
Gas bubble dynamics: a personal journey



Professor
School of Engineeng
Brown University
U.S.A.
Dr. Roberto Zenit

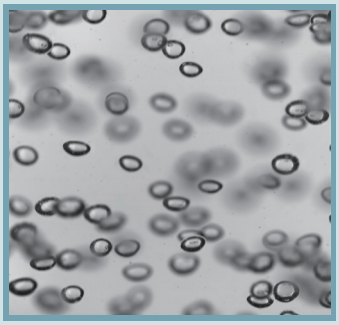
Date and Time

Tuesday
September 12, 2023
9:30 - 10:30

Venue

東京農工大学 小金井キャンパス
6 号館 2 階 201 室
Room 201, 2F, Building 6,
Koganei Campus, TUAT

Abstract The study of the dynamics of gas bubbles in liquids is justified by the numerous applications and natural phenomena where this two-phase flow is encountered. Gas bubbles moveas forces are applied to them ; their dynamics are full of nuances that need to be addressed carefully. Since the mass of gas bubbles is practically negligible, in comparison withthat of the surrounding liquid, their reaction to forces can be drastic. Furthermore, since their surface can be deformed by the same forces acting on them, their shape may changeleading to changes in their resistance to move, the drag force, and therefore affecting their speed. The liquid rheology, as well as its surfactant content can also affect the bubbleshape and motion as well. Understanding these issues, in addition to the effect of interactions with other bubbles, walls and non-uniform flows, provides sufficient elements tomodel and predict bubble behavior through the solution of dynamics equations. In this talk, I will discuss some of these issues which have kept me busy for the past 20 years, toend with suggestions for research directions for the subject in the future.



Zoom

Meeting ID: 850 3790 0809
Passcode: 450104

言語 / 英語　　Language / English

どなたでもご聴講いただけます
Everyone is welcome to attend.

■お問合せ先 / Contact
グローバルイノベーション研究院 / 工学研究院　田川　義之
Institute of Global Innovation Research / Institute of Engineering
Professor Yoshiyuki Tagawa

■共催 / Co-organized by
グローバルイノベーション研究院 ライフサイエンス分野 田川チーム
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