

Gas bubble dynamics: a personal journey



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Date and Time

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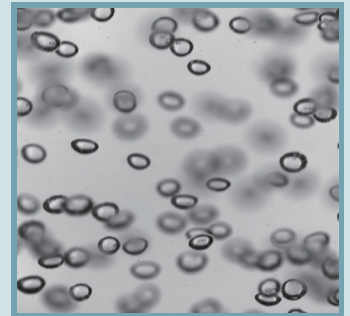
Venue

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 move as 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 with that 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 change leading 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 bubble shape 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 to model 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, to end 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

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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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