特別講演会
Special Lecture

日時：平成 25 年 3 月 18 日（月）15:00～16:00
場所：東北大学流体科学研究所 COE 棟 3 階セミナー室

Schedule: March 18, 2013 (Mon.) 15:00-16:00
Room: Seminar Room (3F of COE Building), IFS, Tohoku University

講師（Lecturer）: Dr. Marc Tinguely (EPFL, Switzerland)
題目（Title）: The effect of pressure gradient on the collapse of cavitation bubbles

講演内容（Abstract）:

While traditionally associated with turbine erosion, cavitation bubbles are now exploited as tools in surgery, microchip cleaning, water treatment, and microfluidics. This wide spectrum of new applications relies on the diversity of processes associated with the collapse of cavitation bubbles, namely (i) the rebound bubbles, (ii) acoustic shocks, (iii) thermal effects, and (iv) microjets. This presentation focuses on examining the effect of the pressure gradient on these processes. First, we address the occurrence of a microjet induced by the pressure gradient. Then, we investigate how much of the energy of the initial bubble is transferred into the rebound and into the shock wave at the collapse of the bubble, for different pressure gradients. The measurements were taken in a cavitation tunnel and onboard zero gravity parabolic flights.

※本特別講演会は流体科学研究所公募共同研究の一環として開催します.

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