



# TUAT Fluid Dynamics Seminar

## Recent Research on Cavitation bubble dynamics at IIT-Hyderabad



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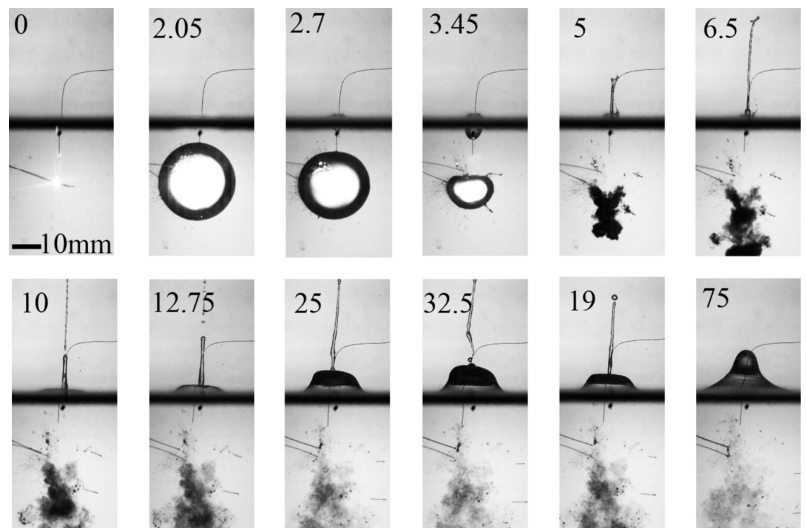
Date: Tuesday, May 14th, 2019

Place: Building 6 - Room 501

Time: 13:00 pm -14:00 pm

### Abstract

In this talk, I will discuss about some specific research problems in the area of cavitation bubble dynamics that we are working on in my laboratory at IIT Hyderabad, India. I will discuss two specific problems a) The entrainment of an air bubble on the free surface of water due to the expansion and collapse of a non-equilibrium bubble and b) The effect of viscosity on the dynamics of a non-equilibrium bubble.



We have used a low-voltage spark circuit wherein a capacitor is first charged and then discharged through two contacting electrodes within a liquid to create a bubble. As the bubble expands and collapses, we observe dynamics of the bubble under different surroundings in both of the above mentioned problems. The entire dynamics were recorded using a high-speed camera which helped to understand the mechanism behind the observed behaviour.

### Biographical Sketch

Badarinath Karri has been working as an Assistant Professor at the Indian Institute of Technology, Hyderabad, India since December 2013. He completed his PhD in 2012 in the area of experimental fluid mechanics from the National University of Singapore and his Masters in the area of Manufacturing Systems and Technology in 2005. He has also worked as a researcher in the area of scheduling and supply chain management in Singapore prior to joining PhD. He is currently a visiting researcher in Prof. Toshiyuki Sanada's laboratory at Shizuoka University from April - July 2019 under the Suzuki foundation fellowship program.