

# **Mathematical modelling of gas bubbles and oil droplets in liquid media using optical linear path projection**

## **Abstract**

This paper describes mathematical modelling of oil droplets and gas bubbles in water. The light sources that are discussed are visible light radiation and infrared radiation. Gas bubbles or oil droplets less than 1 mm diameter are of interest in this investigation. Results show a good agreement between gas bubbles and an oil droplet of radius  $r < 0.5$  mm. The importance of this modelling is that the bubbles approximately describe the characteristics or behavior of oil droplets. This paper shows why a gas bubble is used in this experiment instead of oil droplets.