

Title **Dropwise Condensation**

Speaker Prof. John Rose
Research Professor
Queen Mary University of London
UK



Date & Time Friday, March 9, 2018 3:00 p.m.

Place I2CNER hall, I2CNER Bldg.1, Ito campus, Kyushu University

Abstract

Recent years have witnessed an explosion in the numbers of published research papers in heat transfer as well as in other fields. As a researcher, reviewer and editor over many years I believe that this has had some unfortunate effects. Many papers are not adequately reviewed, many are not read and the more important contributions are obscured; older work in particular is often overlooked resulting in unnecessary repetition (sometimes with errors). The situation is illustrated with reference to the topic dropwise condensation, an area in which I have a lifetime's experience and which has seen a recent resurgence of interest. I had believed that virtually everything regarding heat-transfer measurements and theory of dropwise condensation was well known and understood, in particular the dependence of the very high heat-transfer coefficient on temperature difference and on vapor pressure, and that the only significant outstanding problem, crucial to industrial application, was durability of the dropwise mode of condensation. I am surprised and disappointed that many of the newer investigations seem to be unaware of much of what has gone before and has long been regarded by me as established and accepted. Much of the seminar will concern my earlier experimental and theoretical work with special reference to the requirement for extremely high accuracy in the measurement of very small vapor-surface temperature difference as well as comments on the more recent investigations relating to condensation on "super hydrophobic" surfaces.

About the Speaker

Prof. John Rose has been full Professor at Queen Mary, University of London since 1985, serving as Head of the Department of Mechanical Engineering 1991-1995. He is a Fellow of the UK Institution of Mechanical Engineers and of the American Society of Mechanical Engineers. He is a member of the UK Heat Transfer Committee and of the UK Heat Transfer Society of which he was president for 2007/08. His teaching interests are in the fields of thermodynamics, fluid mechanics and heat transfer. He has held sabbatical appointments at MIT, US Naval Postgraduate School and the Universities of Tokyo and Kyushu. His research interests are mainly in the field of condensation heat transfer in which he has published some 300 theoretical and experimental papers. He is UK editor of International Journal of Heat and Mass Transfer, International Communications in Heat and Mass Transfer, Experimental Heat Transfer and serves on the advisory boards of several other journals.

Host: Professor Yasuyuki Takata

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