



PROFESSOR GEOFFREY FREDERICK HEWITT (FREng, FRS)
(1934 – 2019)

Jader R. Barbosa Jr. (GFC 13.88)
Federal University of Santa Catarina, Brazil

Hewitt Tribute Session - ICMF, Rio de Janeiro, May 2019



CAREER

BSc Tech (1954), PhD (1957): Manchester University
(Chemical Engineering)

(1957) Scientist - Harwell Laboratory of the UKAEA
(1976) Head of the Thermal-Hydraulics Division

(1968 – 1982) Heat Transfer and Fluid Flow Service
(HTFS)

(1985) Professor (part-time) – Imperial College London
(1990) Professor (full-time)
(1993-1999) Courtaulds Professor of Chemical
Engineering
(1999-2019) Emeritus Professor



HONORS & PRIZES

President of the Heat Transfer Society (1978, 2000)
President of the IChemE from 1989-1990
President of the ICHMT (2007-2010)

Fellow of the Royal Academy of Engineering (1985)
Fellow of the Royal Society (1989)
Fellow of the Institute of Chemical Engineers (IChemE)

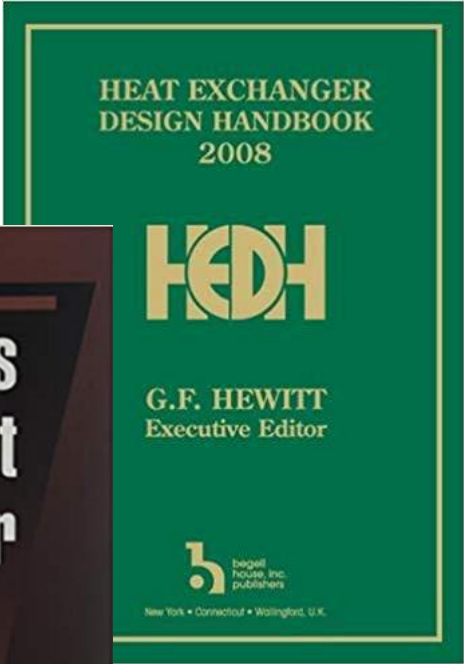
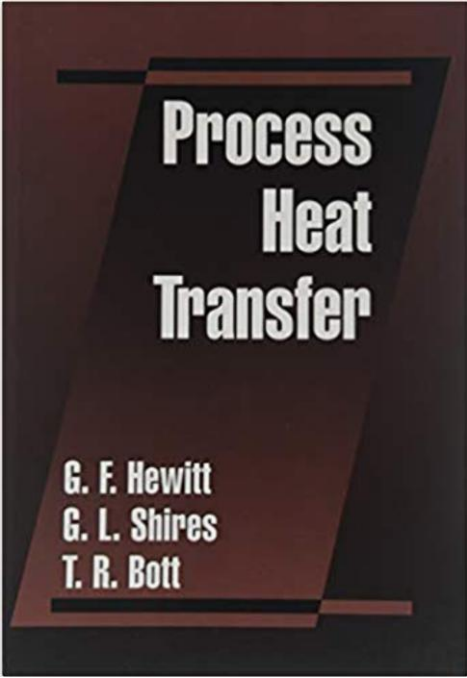
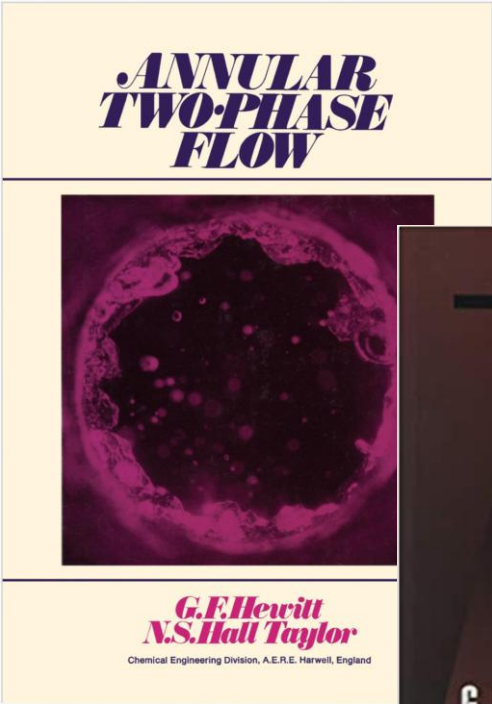
Founding Editor of Heat Transfer Eng. and Multiphase Sci. and Technol.

Donald Q. Kern Award, AIChE (1981)
Max Jakob Memorial Award – ASME (1995)
Luikov Medal (1996)
Nusselt-Reynolds Prize (1997)
Foreign Member – National Academy of Engineering (USA) (1998)
Global Energy Prize, World Economic Forum (2007)
ICMF Senior Multiphase Flow Award (2007)
Imperial College Medal (2016)
IChemE Council (1994), Green (2000) and MM Sharma Medals (2017)

Honorary degrees from Louvain (1988), Heriot Watt (1995) and UMIST (1998)



BOOKS



PAPERS

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BRIEF COMMUNICATION

THE MYTH OF CHURN FLOW?

Z. S. MAO and A. E. DUKLER

Chemical Engineering Department, University of Houston, Houston, TX 77204, U.S.A.

(Received 14 July 1992; in revised form 26 October 1992)

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BRIEF COMMUNICATION

TO CHURN OR NOT TO CHURN

G. F. HEWITT and S. JAYANTI

Department of Chemical Engineering & Chemical Technology, Imperial College of Science,
Technology & Medicine, Prince Consort Road, London SW7 2BY, England

(Received 15 January 1993)

Third Microgravity Fluid Physics

Cleveland, Ohio, June 1996

MULTIPHASE FLOW: THE GRAVITY OF THE SITUATION

By

G.F. Hewitt
Department of Chemical Engineering
& Chemical Technology
Imperial College of Science, Technology
& Medicine,
London, England

European Two-Phase Flow Group Meeting
Aveiro, Portugal, June 18th -20th, 2001

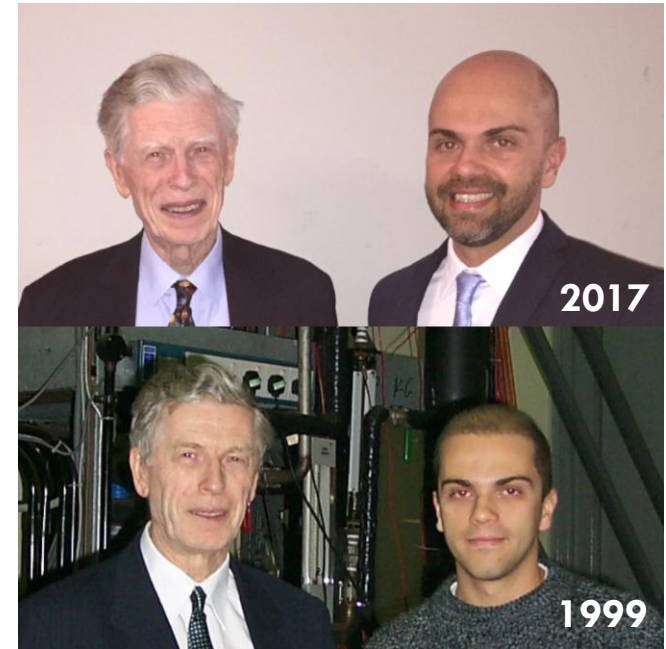
CHURN FLOW: MYTH, MYSTERY & MAGIC

By

J.R. Barbosa, Jr., S.M. Richardson and G.F. Hewitt
Department of Chemical Engineering & Chemical Technology,
Imperial College of Science, Technology and Medicine,
London, England



LEGACY



ICMF 2019 HEWITT TRIBUTE SESSION

Biography – The Royal Society

“Geoffrey Hewitt produced much original work on diffusion, fluid flow and heat transfer in channels, heat exchangers and porous media, particularly for multiphase systems. **In the 1960s, Geoffrey established the basic characteristics of two-phase flow and was the first to demonstrate experimentally the mechanism of ‘burnout’.** The link between theory and experiment was summarised in 1970 in his well-known book with Nicholas Hall Taylor, *Annular Two Phase Flow*, and his book on *Measurement of Two Phase Flow Parameters* was published in 1978. **Subsequently, Geoffrey identified for the first time the existence of ‘disturbance waves’, the dominant interfacial phenomenon in annular two-phase flow. He made important original contributions to our understanding of droplet motion.** In 1967, he initiated and managed the Heat Transfer and Fluid Flow Service, which provides industrial design and operating information on heat exchangers for 180 companies. He was elected President of the Heat Transfer Society in 1978, and received the 1980 Donald Q. Kern Award of the American Institute of Chemical Engineers.”

ICMF 2019 HEWITT TRIBUTE SESSION

ROOM SEGOVIA II

<i>Time</i>	Final #	Abstract	Session	TITLE	<i>Authors</i>	<i>Speaker</i>
16h25 - 16h40				HEWITT TRIBUTE: OPENING		<i>Jader Barbosa</i>
16h40 - 16h55	OC.364	167836	03. Boiling, Condensation, Evaporation	CRITICAL HEAT FLUX AS A MASS FLUX DEPENDENT PHENOMENON: THEORETICAL ANALYSIS, EXPERIMENTAL CONFIRMATION AND FURTHER CFD APPLICATION	<i>DING W, Geiler T, Krepper E, Hampel U</i>	<i>Wei DING</i>
16h55 - 17h10	OC.365	168284	10. Experimental Methods for Multiphase Flows	LIQUID FILM CHARACTERIZATIONS IN UPWARD ANNULAR FLOW FOR COMPLEX GEOMETRIES	<i>Robers L, Adams R, Prasser H-M</i>	<i>Lukas Robers</i>
17h10 - 17h25	OC.366	167785	19. Modelling of Multiphase Flows	A PHYSICAL UNDERSTANDING OF DROPLET ENTRAINMENT IN ANNULAR FLOW BASED ON NUMERICAL DATA	<i>Fan W, Cherdantsev AV, Li H, Anglart H</i>	<i>Wenyuan Fan</i>
17h25 - 17h40	OC.367	167988	19. Modelling of Multiphase Flows	THREE-DIMENSIONAL NUMERICAL SIMULATIONS OF WAVE DYNAMICS IN PLANAR AND ANNULAR FALLING FILMS	<i>Batchvarov A, Kahouadji L, Craster RV, Matar OK</i>	<i>Assen Batchvarov</i>

“Pure curiosity is still what drives me today, and is the most important component of my work. Without curiosity you cannot get excited about scientific research. It is all about creating the spark and igniting the curiosity in people’s mind to get them involved”

GEOFF HEWITT

