

and on transport in melting/solidification, continuous processing, stratified environments, room fires, electronic systems, solar ponds and in other applied fields.

Jaluria has two patents in materials processing: one for methods and apparatus for heating articles, which concerns condensation soldering; and the second is for methods and apparatus for avoiding undesirable deposits in crystal growing operations, as the quality of the crystal is of critical concern in the fabrication of electronic chips. He also has seven copyrighted computer software.

Jaluria has contributed more than 350 technical articles, including 145 in archival journals and 15 chapters in books. The author/co-author of six books, Jaluria is the sole author of a graduate level monograph titled *Natural Convection Heat and Mass Transfer* (Pergamon Press, 1980) and undergraduate textbooks *Computer Methods for Engineering* (Prentice-Hall, 1988) and *Design and Optimization of Thermal Systems* (McGraw-Hill, 1998). He is also the first author of a graduate level textbook titled *Computational Heat Transfer* (Hemisphere, 1986), as well as its updated and expanded second edition (Taylor and Francis, 2003), and a co-author of a graduate book *Buoyancy-Induced Flows and Transport* (Hemisphere, 1988). All of these books have received outstanding reviews and the books on natural convection and buoyancy-induced flows have been translated into Russian. Jaluria is an editor of 13 conference proceedings and two special issues of archival journals.

An ASME Fellow, Jaluria has been active in the Society, particularly the Heat Transfer Division which he chaired during 2002-03. He served as associate technical editor for ASME's *Journal of Heat Transfer* (1993-2000). He is currently a co-editor of *Computational Mechanics*, published by Springer-Verlag. He is also a member of the Combustion Institute and the American Physical Society.

His honors include the 2002 Max Jakob Memorial Award from ASME and the American Institute of Chemical Engineers; ASME's Freeman Scholar Award (2000), Worcester Reed Warner Medal (1999) and Heat Transfer Memorial Award in the Science category (1995); and a Certificate of Recognition from the National Bureau of Standards (1982), the Indian National Science Academy's Young Scientist Medal (1979), the Indian Institute of Technology's Medal for standing first in mechanical engineering in 1970, and a National Science Talent Scholarship from India's National Council of Educational Research and Training (1965).

Jaluria received his bachelor's degree in mechanical engineering at the Indian Institute of Technology, Delhi, in 1970. He earned his master's and doctoral degrees at Cornell University (Ithaca, N.Y.) in 1972 and 1974, respectively.

CITATION: YOGESH JALURIA, Ph.D., Board of Governors Professor, Rutgers, the State University of New Jersey, New Brunswick, *for his internationally renowned work as researcher in several diverse areas, particularly natural convection heat transfer, thermal processing of materials and computational heat transfer; for prolific contributions to the technical literature; and for innovation in the fields of materials processing and computer modeling.*

2003

# ROBERT HENRY THURSTON

*Lecture Award Presentation to*

**Yogesh Jaluria**

**November 19, 2003**

*Presented at the*  
2003 International Mechanical Engineering  
Congress and RD & D Expo  
Washington Marriott Wardman Park  
Washington, DC



**ASME International**

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Introduction by Theodore L. Bergman

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**Robert Henry Thurston Lecture Award**

**YOGESH JALURIA**

*Conferral at the Thurston Lecture,  
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**T**HE ROBERT HENRY THURSTON LECTURE AWARD was established in 1925 in honor of ASME's first president. It provides an opportunity for a leader in pure and/or applied science or engineering to present to the Society a lecture, which encourages stimulating thinking on a subject of broad interest to engineers. The Robert Henry Thurston Lecture Award was elevated to a Society award in 2000.

Dr. Jaluria has been at Rutgers, the State University of New Jersey, New Brunswick, since 1980 and is currently Board of Governors Professor in the department of mechanical and aerospace engineering. He has held visiting appointments at the Solar Energy Research Institute (Golden, Colo.), the National Institute of Standards and Technology (Gaithersburg, Md.) and Tata Consulting Engineers (Bombay, India). He was a visiting scientist, with National Science Foundation support, at the Indian Institute of Technology, Kanpur (1988-89), where he had worked from 1976 to 1980. He also worked for AT&T Bell Laboratories in Princeton, N.J. (1974-76).

An active researcher in fluids and thermal engineering for over 25 years, Jaluria has made pioneering and lasting contributions in a wide range of fundamental and applied areas, such as materials processing, enclosure fires, computational heat transfer, natural and mixed convection transport, environmental flows and optimization of thermal systems. He has carried out detailed analytical, numerical and experimental studies to enhance understanding of the basic transport mechanisms in a variety of engineering problems. He is particularly well known for his work on buoyancy driven flows and transport, both on fundamental aspects