

G.B. Pant Memorial Lectures

I

Dr. M.S. Swaminathan, FRS - 1991

II

Dr. T.N. Khoshoo, FNA - 1992

III

Mr. V. Rajagopalan, Vice President, World Bank - 1993

IV

Prof. U.R. Rao, Member Space Commission - 1994

V

Dr. S.Z. Qasim, Member, Planning Commission - 1995

VI

Prof. S.K. Joshi, Vikram Sarabhai Professor - 1996

VII

Prof. K.S. Valdiya, Bhatnagar Research Professor - 1997

VIII

Prof. Vinod K. Gaur, Distinguished Professor - 1998

IX

Prof. H.Y. Mohan Ram, INSA Senior Scientist - 2000

X

Prof. J.S. Singh, Emeritus Professor, BHU - 2004

XI

Prof. Madhav Gadgil, Center for Ecological Sciences, IISc, Bangalore - 2005

XII

Dr. S.S. Handa, Ex-Director, RRL Jammu (CSIR) - 2006

XIII

Dr. Lalji Singh, Director, CCMB, Hyderabad - 2007



Pt. Govind Ballabh Pant Memorial Lecture : XIV

RODDAM NARASIMHA

September 19, 2008
at
Kosi-Katarmal, Almora



G. B. Pant Institute of Himalayan Environment and Development
Kosi-Katarmal, Almora - 263643
Uttarakhand (INDIA)



Prof Roddam Narasimha

Chairman

Engineering Mechanics Unit

Jawaharlal Nehru Centre for Advanced Scientific Research
Jakkur P O, Bangalore - 560 064

Pratt & Whitney Chair in Science and Engineering

University of Hyderabad, Hyderabad

Ph: 91 80 2208 2999 Fax: 91 80 2293 2951, 2360 0865

Email: roddam@caos.iisc.ernet.in

Date of Birth: 20 July 1933

Educated at:

B.E., University College of Engineering, Bangalore, B.E. 1953

A.I.I.Sc., Indian Institute of Science, Bangalore, D.I.I.Sc. 1955, A.I.I.Sc. 1957

Ph.D., California Institute of Technology, USA, Ph.D. in Aeronautics and Physics 1961

Career:

- Chairman, Fluid Dynamics Unit, Jawaharlal Nehru Centre for Advanced Scientific Research, 1984-
- Director, National Institute of Advanced Studies, 1997-2004
- Indian Institute of Science 1962-1999 holding positions of Professor and Chairman, Aerospace Engineering, Dean Engineering Faculty, at various times, Founder-Chairman, Centre for Atmospheric Sciences, 1982-89
- Director of the National Aerospace Laboratories, 1984-1993
- INSA Golden Jubilee Research Professor, 1990-1994
- ISRO K R Ramanathan Distinguished Professor at IISc/JNC, 1994 -1999
- Chief Project Coordinator, Hindustan Aeronautics Ltd., 1977-79

Visiting positions:

- Clark B Millikan Professor, or Sherman Fairchild Distinguished Scholar, California Institute of Technology (various times since 1982)
- Jawaharlal Nehru Professor at Cambridge University in England, 1989-90
- NASA Langley, various times from 1982
- University of Brussels, 1970
- Adelaide University, 1975
- Strathclyde University, Glasgow, 1971-72
and other places

Research interests:

- Chiefly concerned with aerospace technology, fluid dynamics and related problems in the atmosphere
- Major areas of interest:
 - > Transition, flow control, relaminarization, hydrodynamic stability
 - > Shock waves
 - > Temperature distributions near the ground
 - > Fluid dynamics of clouds, convection
 - > Aerospace engineering development at both technical and policy-making levels
 - > Science and technology policy studies, history of science

Major Honours:

- Fellow of the Royal Society, 1992
- Foreign Associate of both the US National Academy of Engineering (1989) and the US National Academy of Sciences. (2000)

- Foreign Honorary Member of the American Academy of Arts and Sciences, 1999
- Fellow, American Institute of Astronautics and Aeronautics, 1993
- Bhatnagar Prize, 1976
- Gujarmal Modi Award, 1990
- Padma Bhushan, 1987; Karnataka Rajyotsava Award, 1986
- Fellow of all the Indian national academies of science and engineering, President Indian Academy of Sciences 1992-94, and Honorary Fellow of the Aeronautical Society of India, 1985, Distinguished Fellow, Astronautical Society of India, 2003
- Fluid Dynamics Award of the American Institute of Aeronautics and Astronautics, 2000
- Distinguished Alumnus of both Caltech (1986) and IISc (1988)
- Bhatnagar Medal, INSA 1985; Srinivasa Ramanujan Medal, Indian Science Congress 1988; National Design Award, Institution of Engineers 1996
- Invited lectures at various international conferences including International Congress of Theoretical and Applied Mechanics (1996), the American Institute of Aeronautics and Astronautics (1085, 1999), the Royal Aeronautical Society (1991), the Australasian Conference of Fluid Mechanics (1989, 2001), Kovaszny Distinguished Lecture at University of Houston, Texas (1994), the Royal Netherlands Academy of Sciences (1995) etc.
- The Sixth Yunchuan Aisinjiro-Soo Distinguished Lecturer, The University of Illinois (Urbana-Champaign) (2002)
- Honorary Doctorate from Gulbarga (1994), Roorkee (1996), Banaras Hindu University (2002)
- Distinguished Engineer Award, Engineering Staff College of India (Institution of Engineers), 15 September 1995
- National Design Award, Institution of Engineers 1996
- American Institute of Aeronautics and Astronautics Fluid Dynamics Award 2000
- Fellow, The World Innovation Foundation, UK 2000
- Life Time Contribution Award in Engineering 2003, Indian National Academy of Engineering
- Aryabhata Award, Astronautical Society of India, 2004

Advisory Positions:

- Member, Space Commission
- Member, Scientific Advisory Council to the Prime Minister
- Member, National Security Advisory Board, 1998-2006
- Member, Indira Gandhi National Centre for the Arts
- Member, Consultative Group of Eminent Senior Scientists, Government of India
- Member, Bureau International Union of Theoretical and Applied Mechanics
- Co-Founder, Asian Congress of Fluid Mechanics; Member of Asian Fluid Mechanics Committee 1980- , Chairman 1998-2000
- Chairman, Advisory Board, CSIR (1999-)

Publications:

Editor of 15 books; author of nearly 250 papers on numerous technical subjects and policy matters and of various technical reports.

Member of Editorial Board of Experiments in Fluids (Springer), Fluid Dynamics Research (North Holland), Sadhana (Indian Acad. Sci.), Journal of Aerospace Engineering (I. Mech. E. London), Current Science (Bangalore), Journal of Theoretical and Computational Fluid Dynamics.

Contd...