D. M. Bose Memorial Lecture

November 26, 2017

Venue: Bose Institute Main Campus

Speaker:	**Prof. R. Ramaswamy, JNU, New Delhi**
Chairman:	**Prof. Ajit Kumar Mohanty, Director, SINP**

Programme:

2.30pm:	Museum Visit and Floral Offering at J C Bose's Bust
2.45pm:	Floral Offering at J C Bose's Samadhi
2.50pm:	Plantation of Saplings
2.55pm:	Floral Offering at Dr. S. N. De's Bust
3.00pm:	Bose Institute Anthem
3.05pm:	D M Bose Memorial Lecture by Prof. R. Ramaswamy
Topic:	**Chimera States: Spontaneous Symmetry- Breaking in Dynamical Systems**
4.05pm:	Felicitation of Prof. R. Ramaswamy
4.10pm:	National Anthem
4.15pm:	Tea & Snacks

Chimera States:
Spontaneous Symmetry-Breaking in Dynamical Systems

Prof. R Ramaswamy
Jawaharlal Nehru University
New Delhi

Networks of nonlinear oscillators that arises in a variety of natural and technological settings often display synchrony, a temporally homogenous state. Examples including the concerted flashing of fireflies, metabolic oscillations in yeast, or in coupled superconducting Josephson junctions. It is also known that networks of identically coupled identical oscillators can in some circumstances spontaneously split into subgroups with different dynamical characteristics. In the simplest examples, there are two subgroups, one of which is fully synchronised, while the other is desynchronised. More complex dynamical patterns are possible.

Dynamical Chimeras were first discovered in numerical studies, but have, in the past two decades, been seen in a number of experiments, and are believed to underlie interesting physiological states such as uni-hemispheric sleep that sea mammals and birds experience. Other situations where such states of broken symmetry may be relevant include ventricular fibrillation, and the so-called bump states in neural networks. The origin of the symmetry breaking that gives rise to such complex spatiotemporal patterns and the current interest in these phenomena will be discussed.

BOSE INSTITUTE
KOLKATA

Director
and
Members of Staff of Bose Institute
request the pleasure of your company at the

D. M. Bose Memorial Lecture 2017

on

26th November, 2017 at 3.00 p.m.

on the occasion of the
133rd Birthday of Prof. Debendra Mohan Bose

Speaker

Prof. R Ramaswamy
Jawaharlal Nehru University
New Delhi

Titled
Chimera States: Spontaneous symmetry-breaking in dynamical systems

Venue
Bose Institute Lecture Hall
93/1, A P C Road, Kolkata 700 009

Prof. Siddhartha Roy
Director (Officiating)

Ramakrishna Ramaswamy
Professor
Jawaharlal Nehru University
New Delhi
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Education

1972	B.Sc., Chemistry, Madras University, India
1974	M.Sc., Chemistry, IIT Kanpur, India
1978	Ph.D., Chemistry, Princeton University, USA

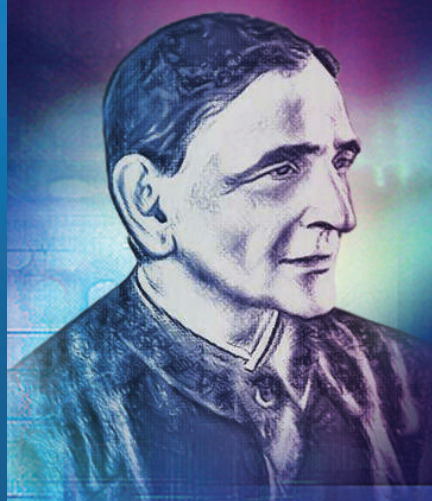
Appointments

2016 - 2018	President, The Indian Academy of Sciences, Bangalore
2015 - 2016	Vice President, Indian National Science Academy, New Delhi
2013 - 2016	Vice President, The Indian Academy of Sciences, Bangalore
2012 - 2015	Chairman, National Council of Rural Institutes
2011 - 2015	Vice Chancellor, University of Hyderabad
2002 - 2004	Dean, School of Information Technology, Jawaharlal Nehru University, New Delhi
1999 - 2001	Dean, School of Physical Sciences, Jawaharlal Nehru University, New Delhi
1991 - 1993	Dean, School of Physical Sciences, Jawaharlal Nehru University, New Delhi
1990 -	Professor, Jawaharlal Nehru University, New Delhi

Honors and Awards

2008	Elected Fellow, Academy of Sciences for the Developing World (twas) Trieste
2008	Elected Fellow of the Indian National Science Academy, New Delhi
1993	Elected Fellow of the Indian Academy of Sciences, Bangalore

D. M. Bose Memorial Lecture 2017



133RD BIRTHDAY CELEBRATION OF PROF. DEBENDRA MOHAN BOSE

26th November, 2017

Bose Institute
Kolkata

133RD
BIRTHDAY CELEBRATION OF
PROF. DEBENDRA MOHAN BOSE

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