ICTS – PIMS – IISER PUNE PROGRAM ON ADVANCES IN MATHEMATICAL BIOLOGY

7-16th Decemeber, 2014, IISER Pune

SCHEDULE

Session		7th	8th	9th	10th	11th	12th	13th	15th	16th
		Introduc-tion	**Ecology, Epidemiology and Immunology**			**Statistical inference of biological data**		**Collective behaviour in cellular and organismal biology**		
Lectures	9 am – 11am	Registration	Lewis	Coombs	van den Driessche	Lele (9-10 am) Gore (start: 10 am)	Deshmukh	Si. Sinha	Chowdhury	Rao
	11 am – 11:30 am	Tea								
	11:30 am – 1 pm	Goel	Lewis	Coombs	van den Driessche	Gore	Deshmukh	Si. Sinha	Chowdhury	Rao
	1 pm – 2:30 pm	Lunch								
Discussion	2:30 pm – 3:30 pm	Goel	Sarkar	Lewis	Dey	Lele	Gore	Assisi	So. Sinha	Rao
	3:30 pm – 4 pm	Tea								
	4 pm – 5 pm	Goel	Watve	van den Driessche	Coombs	Lele	Deshmukh	Si. Sinha	Chowdhury	
	7 pm - 8 pm	Dinner								

Speakers

(In chronological order)

Pranay Goel (IISER Pune), *Introductory lectures.*

Mark Lewis (**University of Alberta),** *The mathematics behind biological invasions*.

Ram Rup Sarkar (National Chemical Laboratory), *Mathematical and statistical modelling of malaria*.

Milind Watve (IISER Pune), *Inferring causation from correlations in a homeostatic steady state: the case of glucose regulation.*

Daniel Coombs (University of British Columbia), *Stochastic approaches to within-host dynamics*. Discussion talk: *Individual and population approaches to biological motion*.

Pauline van den Driessche (University of Victoria), *Basic ideas of mathematical epidemiology*. Discussion topic: *Extension to cholera models*.

Sutirth Dey (IISER Pune), *Controlling the dynamics of populations: an experimental biologist's perspective.*

Anil Gore (Cytel), *Healthy numbers* and *Clinical trials for health and beauty*.

Shailaja Deshmukh (Pune University), together with **Akanksha Kashikar (Pune University)**, *Statistical inference for microarray data analysis*.

Sitabhra Sinha (Institute of Mathematical Sciences), *Patterns of life & death: Excitable dynamics of biological cells & tissue.* Discussion talk: *Pattern formation through lateral inhibition in arrays of coupled relaxation oscillators.*

Collins Assisi (IISER Pune), *Information processing in the olfactory system*.

Debashish Chowdhury (Indian Institute of Technology Kanpur), *Collective dynamics in force generation and information processing in a cell.*

Somdatta Sinha (IISER Mohali), *Collective behaviour in cells and populations*.

Madan Rao (National Center for Biological Sciences), *Active biological matter*.