

**National Conference on Recent Trends in Mathematical
Biology - Theory, Methods and Applications
July 20-22, 2023**

SCHEDULE

**Department of Mathematics and Computer Science
(DMACS)**



**Sri Sathya Sai Institute of Higher Learning
(SSSIHL)**



SCHEDULE

DAY 1: 20-07-2023 – THURSDAY

8:45 AM – 8:50 AM - Veda Chanting, Ceremonial Lighting Lamp

8:50 AM – 9:00 AM - Introductory Remarks by
Convener of the Conference
Dr. D. K. K. Vamsi

9:00 AM – 9:10 AM - Welcome Remarks by
Dean of Sciences - SSSIHL
Prof. Pallav Kumar Baruah

9:10 AM – 9:25 AM - Inaugural Address by Revered
Vice-Chancellor – SSSIHL
Prof B. Raghavendra Prasad

9:25 AM – 10:10 AM - *Plenary Talk*

Mathematical Modeling as a National Health Planning Tool in India

Prof. Arni S.R. Srinivasa Rao
Professor and Director
Laboratory for Theory & Mathematical Modeling,
Medical College of Georgia, U.S.A.

10.10 AM – 10:40 AM - *Photo Session & Refreshments Break*

10.40AM - 11:20 AM - *Keynote Address*

Stabilized Variational Multiscale Sub-Grid Finite Element Analysis Transport Model with Application to Hemodynamics

Prof. B. V. Rathish Kumar
Department of Mathematics and Statistics IIT Kanpur

SCHEDULE

DAY 1: 20-07-2023 – THURSDAY

11:20AM - 11:50 AM - *Invited Talk- I*

Bifurcation Analysis of a Predator-prey Model with Allee Effect and Fear Effect in Prey and Hunting Cooperation in Predator

Dr. Prashant Kumar Srivastava
Department of Mathematics
IIT Patna

12:00 PM – 1:30 PM - *Lunch Break*

1:30PM – 2:00 PM - *Invited Talk- II*

Entropy stable non-oscillatory fluxes:
An optimized wedding of entropy conservative flux with non-oscillatory flux

Dr. Ritesh Kumar Dubey
Department of Mathematics
SRMIST, Chennai

2:00PM – 2:30 PM - *Invited Talk- III*

Benefits and Drawbacks of Polyphagy in Natural Enemies and Pests in the Context of Biological Control: A Theoretical Framework

Dr. S R V Prasad Bhuvanagiri
Department of Mathematics,
School of Advanced Sciences
VIT Vellore

SCHEDULE

DAY 1: 20-07-2023 – THURSDAY

2:30 PM – 3:00 PM - *Invited Talk- IV*

Understanding Dynamics of COVID-19
in India using Data Driven Model

Dr. Nitu Kumari
School of Basic Sciences
IIT Mandi

3:00 PM – 3:30 PM - *Refreshments Break*

3:30 PM – 5:00 PM - *Visit to CRIF Building*

5:00PM – 6:30 PM - *Paper Presentation Session – I*

Day Ends

DAY 2: 21-07-2023 – FRIDAY

9:15 AM – 9:45 AM - *Invited Talk – V*

Population Interactive Models and
Biocontrol

Dr. Jai Prakash Tripathi
Department of Mathematics
Central University of Rajasthan

SCHEDULE

DAY 2: 21-07-2023 – FRIDAY

9:45 AM – 10:30 AM - *Research Musings from DMACS-SSSIHL Session – I*

Applicability of Mathematical Biology –
The Road Less Traversed A Journey
from Theory to Applicability

**Dr. D. K. K. Vamsi &
Mr. D. Bhanu Prakash
DMACS - SSSIHL**

10:30 AM – 10:50 AM - *Refreshments Break*

10:50AM - 11:30 AM - *Research Musings from DMACS-SSSIHL Session – II*

Other DMACS Research Areas

**Dr. N. Uday Kiran
DMACS -SSSIHL**

11:30 AM - 12:00 PM - *Invited Talk – VI*

Bifurcations, Triple and Quadruple
attractors, and organized periodic
structures in a discrete-time
predator-prey system.

**Dr. Bapan Ghosh
Department of Mathematics
IIT Indore**

12:00 PM – 2:00 PM - *Lunch Break*

2:00 PM – 2:30 PM - *Invited Talk – VII*

Stability of a within-host model of
dengue virus transmission

**Dr. P. Muthu
Department of Mathematics
NIT Warangal**

SCHEDULE

DAY 2: 21-07-2023 – FRIDAY

2:30 PM – 3:00 PM - *Invited Talk – VIII*

Mathematical Modeling of COVID-19

Prof. Mini Ghosh
Department of Mathematics
VIT – Chennai

3:00 PM – 3:30 PM - *Invited Talk – IX*

Effect of productivity & seasonal variation on phytoplankton intermittency on a microscale an ecological study using closure approach

Prof. Sandip Banerjee
Department of Mathematics
IIT Roorke

3:30 PM – 4:00 PM - *Refreshments Break*

4:00 PM – 4:45 PM - *Paper Presentation Session – II*

5:00 PM - 6:00 PM - *Mandir Visit*

6:15 PM - 7:00 PM - *Paper Presentation Session – III*

Day Ends

SCHEDULE

DAY 3: 22-07-2023 – SATURDAY

9:20 AM – 10:00 AM - *Invited Talk- X*

Mathematical modeling to understand cancer cell adaptation during metastasis and therapy resistance

Dr. Mohit Kumar Jolly
Centre for BioSystems Science and Engineering (BSSE)
IISc Bangalore

10:00 AM – 10:30 AM - *Invited Talk – XI*

Bioinspired Membrane Based Pumping Mechanism for micro level Transport Phenomena

Dr. Dharmendra Tripathi
Department of Mathematics and Statistics
NIT Uttarakhand

10:30 AM – 11:00 AM - *Refreshments Break*

11:00 AM - 11:30 AM - *Invited Talk – XII*

The Science of Aging: Actuarial Perspectives on Longevity and Health

Mr. Satya Sai Mudigonda
DMACS - SSSIHL

11:30 AM – 12:15 PM - *Valedictory Function*

Vote of Thanks & Feed Back Session

12:15 PM – 2:00 PM - *Lunch Session*

CONFERENCE ENDS