



HOOGLHY WOMEN'S COLLEGE

DEPARTMENT OF MATHEMATICS




*One Day
National Level Webinar
On*



Mathematical Modeling and its Real World Applications

Date: 8th September, 2020 :: Time: 10:45 to 13:45

Patron :



Dr. Sima Banerjee
Principal, Hooghly Women's College
Hooghly, West Bengal


Organized by
Department of Mathematics &
IQAC of Hooghly Women's College
(Affiliated to The University of Burdwan)

Programme Schedule


10:30 – 10:45: Joining Google Meet and You Tube live streaming
10:45 – 10:55 Welcome address by Dr. Sima Banerjee
10:55 – 11:00 Introduction – Dr. Samadyuti Haldar
11:00 – 11:50 Talk by Dr. Nandadulal Bairagi
11:55 – 12:45 Talk by Dr. Kunal Chakraborty
12:50 - 13:40 Talk by Dr. Nilam
13:40 - 13:45 Vote of Thanks by Dr. Gurudas Biswas.

All Teachers, Scientists, Researchers, Students and interested fellows are cordially invited in this Webinar – Dr. S. Haldar, Convener


Invited Speakers



Dr. Nandadulal Bairagi
Professor, Department of Mathematics,
Jadavpur University, West Bengal.



Dr. Kunal Chakraborty
Scientist-E, INCOIS, Hyderabad,
Ministry of Earth Science,
Govt. of India.



Dr. Nilam
Assistant Professor,
Dept. of Applied Mathematics,
Delhi Technological University, Delhi

Webinar is open to all & Registration is free

Registration link: [https://](https://www.google.com/events/hooghlywomenscollege@gmail.com/hwc.math@gmail.com) [Click Here](#)
(Registration will be open till seats are vacant)

Web Platform: [Google Meet & YouTube Live](#)

Note for the participants :

- ✦ Registered participants will receive a link through which they can join a WhatsApp group.
- ✦ All relevant information will be available only in that group.
- ✦ Registered participants will get Certificates after submission of feedback.

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- ✦ Dr. Swati Chatterjee, Associate Professor, Department of Mathematics, BU
- ✦ Dr. Syamalina Goswami, Associate Professor Head, Department of Geography, HWC.

Organizing Committee :

- ✦ Dr. Samadyuti Haldar Convener, Head of the Department of Mathematics, HWC
- ✦ Dr. Gurudas Biswas, JI Convener, Department of Mathematics, HWC
- ✦ Smt. Sumitra Ghosh, Department of Mathematics, HWC
- ✦ Miss. Rima Dutta, Department of Mathematics, HWC

Technical Support : Sri Chirantan Hazra, Head, Department of Physics, HWC



People (10)

Add people

- Chirantan
- Gurudas Biswas
- Kunal Chakrabo
- Nilam Rathi
- Prof. Nandadula
- Rima Dutta
- Samadyuti Hald
- Samadyuti Hald

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Present now



Presentation (Nilam Rathi)

Turn on captions

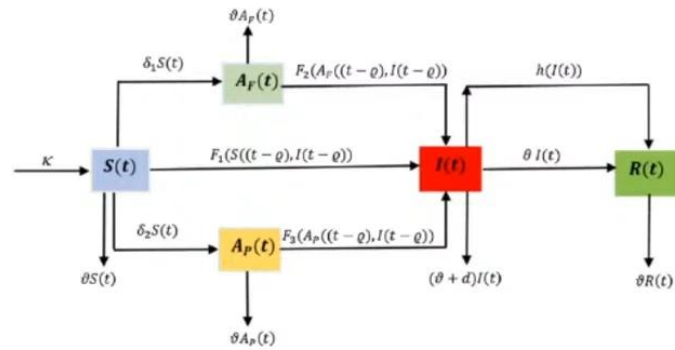
Nilam Rathi is presenting

+ Add people

- Chirantan Hazra
- Gurudas Biswas
- Kunal Chakrabarti
- Nilam Rathi (Presenting)
- Unpin
- Nilam Rathi
- Samadyuti Halder
- Samadyuti Halder
- sumitra ghosh

ϑ	Natural death rate
d	Disease-induced death rate
θ	Recovery rate
a	Cure rate
b	Rate of limitations in treatment availability

Fig. 1 Flow diagram of the model (1)



biological reasons, we assume that the model parameters $\kappa, \delta_1, \delta_2, \beta_1, \beta_2, \beta_3, \varepsilon, \vartheta, d, a, b$ are positive. By the fundamental theory of functional differ-

$$+ A_F(t) + A_P(t) + I(t) + R(t) \leq \frac{\kappa}{\vartheta}$$

Delayed SIR model with non linear Incidence and treatment rate:


$$\frac{dS}{dt} = A - \mu S - \frac{\beta S(t-\tau)I(t-\tau)}{(1+\alpha S(t-\tau)+\gamma I(t-\tau))}, \quad (1)$$


$$\frac{dI}{dt} = \frac{\beta S(t-\tau)I(t-\tau)}{(1+\alpha S(t-\tau)+\gamma I(t-\tau))} - (\mu + d + \delta)I - \frac{aI}{1+bI}, \quad (2)$$

$$\frac{dR}{dt} = \frac{aI}{1+bI} + \delta I - \mu R. \quad (3)$$


where $\tau > 0$ is a fixed time during which the infectious agents develop in the vector and it is only after that time that the infected vector can infect a susceptible individual.




 Kunal Chakraborty

 Gurudas Biswas



 Samadyuti Halder

 sumitra ghosh

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One Day National Webinar

On

Mathematical Modelling and its Real World Applications

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Hooghly Women's College**

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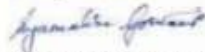
8th September, 2020

Certificate of Participation

This is to certify that Prof./Dr./Mr./Mrs./Ms. *Tesfaye Teferi Shome*.....
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Day National Webinar on "*Mathematical Modeling and its Real World
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September, 2020*.

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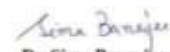
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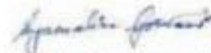
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*One Day National Webinar on "Mathematical Modeling and its Real World
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Certificate ID: HWC20NLWMB0908029
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