



R. J. COLLEGE of Arts, Science & Commerce (AUTONOMOUS)

(Hindi Vidya Prachar Samiti's RAMNIRANJAN JHUNJHUNWALA COLLEGE of Arts, Science & Commerce)

Opposite Ghatkopar Railway Station, Ghatkopar (West), Mumbai 400086, Maharashtra, INDIA.

Website: www.rjcollege.edu.in Email: rjcollege@rjcollege.edu.in Tel No: +91 22 25151763 Fax No: +91 22 25150957

College is recognized under Section 2(f) & 12(B) of the UGC Act, 1956

Affiliated to UNIVERSITY OF MUMBAI || NAAC Re-Accredited 'A' Grade (CGPA: 3.50)

10th JUNE, 2020

NOTICE

The department of physics is organising RJC Physics lecture series in association with IAPT Mumbai Sub RC under DBT star college activity. This activity intends to develop the capacity skills of students and for improving student capability by appraising them of the recent trends in technology. The lecture would be delivered by eminent physicist and would be interactive. the details of the session is available in the brochure. the session would be online on zoom platform.

Session: 18th June, 2020, 4PM

Resource Person: Dr Sitabhra Sinha, Institute of Mathematical Sciences, Chennai

Topic : Epidemics, Networks and Games

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DBT STAR COLLEGE ACTIVITY

RJC Physics Lecture Series 3:

Epidemics, Networks and Games

Dr. Sitabhra Sinha, Institute of Mathematical Sciences, Chennai.

Dr. Sinha is Professor at Institute of Mathematical Sciences, Chennai.

His interests include complex systems and networks, nonlinear dynamics and applications to pattern formation, Statistical Mechanics and applications to social & economic phenomena, Mathematical epidemiology.



18th June, 2020
Thursday

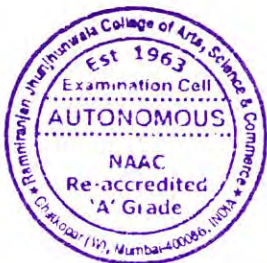


4.00 pm



Zoom Platform & Live on YouTube: <https://www.youtube.com/rjcopencourseware>
OR <https://youtu.be/GkvYZ1IVRY>

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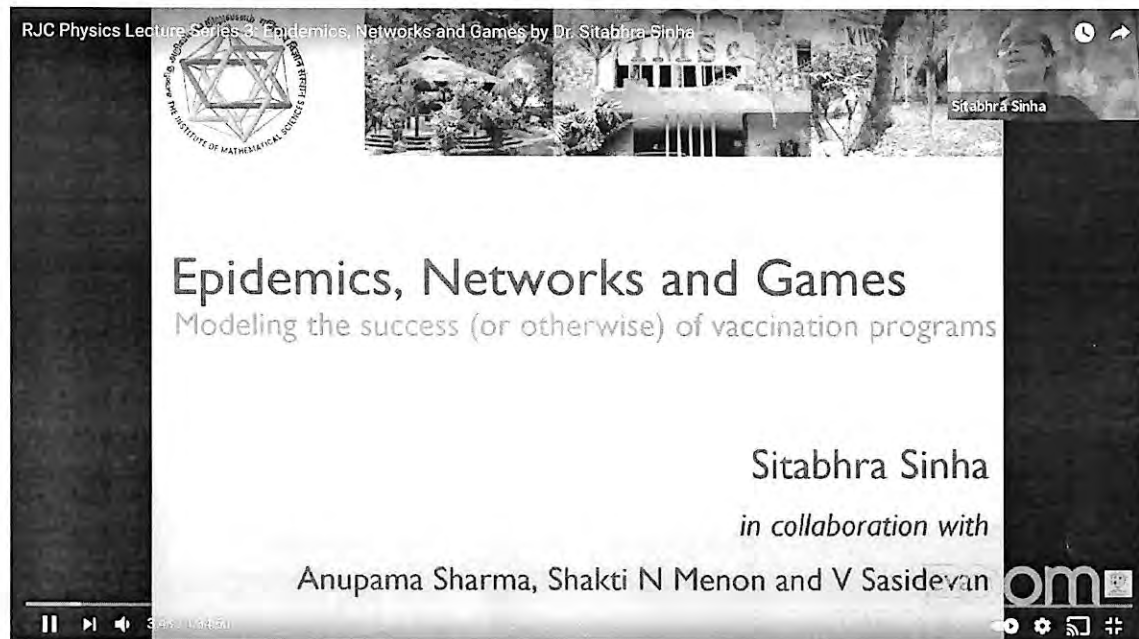
REPORT

Capacity Development and skill enhancement activity organised for improving students capability (Awareness of Trends in Technology)

Prof. Sitabhra Sinha (IMSc, Chennai) - 18 June - Epidemics, Networks and Games

You Tube link: <https://www.youtube.com/watch?v=GkvYZ1IVRY&t=5s>

RJC Physics Lecture Series 3: Epidemics, Networks and Games by Dr. Sitabhra Sinha, Institute of Mathematical Sciences, Chennai. Dr. Sinha is Professor at Institute of Mathematical Sciences, Chennai. His interests include complex systems and networks, nonlinear dynamics and applications to pattern formation, Statistical Mechanics and applications to social & economic phenomena, Mathematical epidemiology. He described how a game model can explain the current pandemic.



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USA: Largest Measles Outbreak in 25 Years Surpasses 980 Cases

Confirmed Measles Cases by County in 2019

The New York Times
June 3, 2019
Satabhra Sinha

Measles was declared eliminated in the United States in 2000 but has made a comeback in recent years...

RJC Physics Lecture Series 3: Epidemics, Networks and Games by Dr. Satabhra Sinha

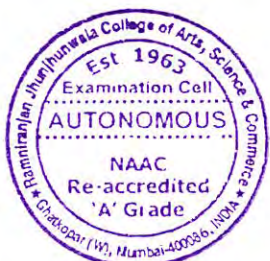
The Utility of Mathematical Modeling

We need to consider

- How diseases spread through contact ?
Modeling how epidemics arise and spread through social network of individuals in a population

and

- How individuals voluntarily take decisions to get vaccinated (or vaccinate their children) ?
Modeling how individuals take decisions based on information about the possible outcomes of their choices.



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RJC Physics Lecture Series 3: Epidemics, Networks and Games by Dr. Sitabhra Sinha

How to model the process by which agents take vaccination decision ?

Assuming agents are rational individuals trying to maximize their personal utility (benefit) based upon information available to them...

... we can use the theory of games (strategic decision-making)

44:52 / 1:34:58

RJC Physics Lecture Series 3: Epidemics, Networks and Games by Dr. Sitabhra Sinha

Vaccination

Biggest contribution to public health of 20th century medicine

And yet....

AREN'T JUST FOR CHILDREN
ADULTS CAN BE PROTECTED FROM 14 DEADLY DISEASES

WHAT ARE THE RISKS?

Up to a month of missed work or school days
Millions of hospitalizations and hundreds of thousands of deaths
Tens of thousands of chronic illnesses and permanent disabilities
Spreading diseases to the most vulnerable - children and older adults

- Shingles
- Hepatitis A
- Hepatitis B
- Whooping Cough
- Mumps
- Tetanus
- Pneumococcal Disease
- Influenza (Flu)
- Measles
- Meningococcal Disease
- Chickenpox
- Rubella
- HPV
- Diphtheria

5:00 / 1:45:50



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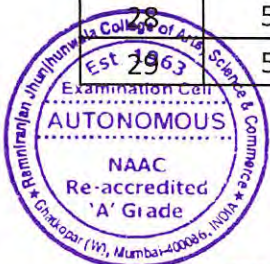
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DEPARTMENT OF PHYSICS

Guest Lecture : "Epidemics, Networks and Games" on 18th June, 2020

STUDENTS ATTENDANCE SHEET

SR NO	ROLL NO	CLASS	NAME OF THE STUDENT PARTICIPANT
1	202	TYBSC	ASRAF NISHA A MUMTAJ
2	204	TYBSC	CHAUHAN RAMNARESH RAMAJOR KUSUMDEVI
3	206	TYBSC	DUBE TANVI RAKESH LATA
4	209	TYBSC	FARHAD MOHD YASEEN NASREEN
5	210	TYBSC	GUPTA ABHISHEK NANDKISHOR SHARADA DEVI
6	211	TYBSC	GUPTA ANILKUMAR LALLURAM RATNADEVI
7	215	TYBSC	JAIWAR PRAVESHKUMAR SHRIPRAKASH MADHURI
8	221	TYBSC	KM UJJWALA MAUZILAL GULAB DEVI
9	222	TYBSC	KUMAWAT GULABCHANDRA MANGILAL SHANTI
10	230	TYBSC	PRAJAPATI KARAN JAIPRAKASH CHANDRAKALADEVI
11	232	TYBSC	RATHOD DINESH KISHAN SHANTA SHANTA
12	233	TYBSC	SAIYED FATIMA MUSHARAF ALI SHAISTA
13	237	TYBSC	SHAIKH SUFIYA ILYAS AHMED CHAMAN BI
14	238	TYBSC	SHARMA RANI BABULLE REKHA
15	240	TYBSC	SINGH KUNAL HARDEEP LALITA
16	3	SYBSC	AZMI SHUMYLA TAMKIN MOHAMMED ZIA MAHJABEEN
17	5	SYBSC	CHADHA LOVLEENKAUR KARNAILSINGH JASPALKAUR
18	13	SYBSC	GUPTA SUNNY SANTOSH SUNITA
19	18	SYBSC	KHAN ADIBA KHALIL UR REHMAN FOUZIYA
20	27	SYBSC	MISHRA ANIKET HEMANT NEELAM
21	30	SYBSC	PAL ANJALI MOHANLAL SUMAN
22	31	SYBSC	PANDEY SATYAM SANJAY POONAM
23	36	SYBSC	SHAIKH RESHMA ABIDALI SHARIFUNNISHA
24	44	SYBSC	SHUKLA RITIKA JAYPRAKASH PRAVINA
25	46	SYBSC	SINGH ANURAG OMPRAKASH KANCHAN
26	48	SYBSC	SINGH SATYAM SATISH SANDHYA
27	50	SYBSC	SINGH VISHWAS TRIBHUVAN ANITA
28	51	SYBSC	SINGH VIVEK ANIL GEETA
	52	SYBSC	TIWARI ASHISH SHIVPRAKASH REKHA



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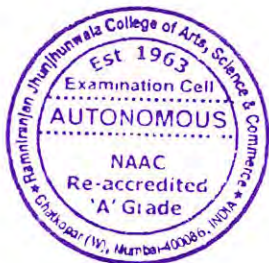
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30	56	SYBSC	YADAV DHEERAJ KUMAR LALBAHADUR MALADEVI
31	58	SYBSC	YADAV KAJAL SUBHASHCHANDRA ANITA DEVI
32	64	SYBSC	GUPTA PRIYA RAMLOLAK MANJUDEVI
33	72	SYBSC	YADAV SARITA RAMAKANT PRABHAVATI
34	74	SYBSC	KHAN ARSHEYA AZIZ KHAN QURESHA
35	107	SYBSC	POOJARI LAKSHITA SANTOSH GEETA
36	112	SYBSC	SHUKLA JYOTI MAHENDRAKUMAR SAROJ
37	117	SYBSC	YADAV BABITA RAMASHANKAR INDRAVATIDEVI
38	204	SYBSC	GAUD AKASH RAMAVADH SUNITA
39	206	SYBSC	JAISWAL KAUSHAL SUBHASHCHANDRA ANUDEVI
40	208	SYBSC	KANNAUJIYA NEELAM SHRI NAND LAL SHRIMATI RANJU
41	219	SYBSC	SINGH SANDIP KRISHANKUMAR LAKSHMI
42	221	SYBSC	UPADHYAY AKASH SUSHIL KUMAR REKHA
43	1	MSC - II - PHY	AGRAHARI MAMTA CHANDRAPRAKASH
44	3	MSC - II - PHY	JESWANI AJAY JAGDISH
45	4	MSC - II - PHY	KANGRALKAR NAKUL SURESH
46	5	MSC - II - PHY	KARANGUTKAR SIDDHESH AMARDEEP
47	7	MSC - II - PHY	MISHRA SUNITI RAMASHANKAR
48	8	MSC - II - PHY	NAIR SREELAXMI SUDHAKARAN
49	10	MSC - II - PHY	SHAIKH SAEEDAKHTAR WASIMALI
50	11	MSC - II - PHY	SHAIKH SHARUKH DILSHAD
51	12	MSC - II - PHY	SHARMA PAWAN KUMAR RAJ KUMAR
52	13	MSC - II - PHY	UPADHYAY ANKIT KUMAR OMPRAKASH
53	15	MSC - II - PHY	YADAV RAHUL KAPTAN SINGH



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Head, Department of Physics

Principal



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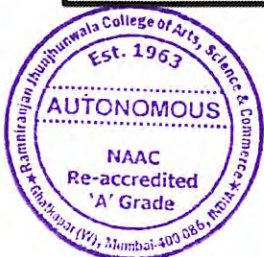
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