

RISE WITH EDUCATION
NAAC REACCREDITED - 'A' GRADE



INVITATION

To Respected,
Dr. Leela Subramanian

It gives me immense pleasure to invite you as our guest speaker on behalf of Department of Microbiology, SIES College. We are conducting a workshop on "Development of skills in Biostatistics to analyse Biological data set" as a part of skill development program for our students. We would appreciate it if you address our students so they can benefit from your knowledge. The workshop would be held on 2nd, 3rd and 4th March 2022 at 3 to 6 PM on Microsoft teams. We are looking forward to have you.

Yours sincerely,
M Phadke
Dr. Manju Phadke
HOD Microbiology
SIES College Autonomous

REPORT FORMAT

A. Title of the Seminar/Workshop/Conferences

Development of skills in Biostatistics to analyse biological data set

B. Background

Biostatistics is the key to data analysis, where large biological data sets are concerned and draw inferences. Today, biological research is growing at a humongous pace and the skill of biostatistics has become the need of the hour, in every walk of biological research, be it clinical trials, vaccine development, bioremediation or even molecular biology.

C. Aims/Objectives

The students who study biological science have studied statistics, as a subject, in higher secondary, thereafter, have lost touch with the subject. They have no understanding of the statistical tools available, the software available and the applications of the same.

Keeping this in mind, a two-day workshop has been designed, where all the basic and advanced statistical tools and their applications will be taught to the students, along with the use of basic software, like R software and analysis of data in Microsoft excel.

This workshop will enhance the analytical skills of the student and will help them draw statistically valid inferences, at the same time, will help in validating their data.

Objectives:

- 1) To teach the basic skill sets of biostatistics
- 2) To teach the use of software used in biostatistics
- 3) To help students analyse data sets and draw inferences
- 4) To teach the students the precise application of the statistical tools available
- 5) To enhance the analytical thinking of the student

D. Location

Conducted online on MS Teams

E. Target audience/participants with expected number

Undergraduate third year students, post-graduate students and PhD candidates.

Total number of participants: 45

F. Details of Sessions:

Workshop was inaugurated at 2:50 pm on 2nd March 2022. Dr. Manju Phadke felicitated and introduced the resource person and gave the overview of the two-day workshop.

- **Session 1: (Day 1)**
Speaker gave the background of statistics and applications of statistical tests to biological data.
She introduced participants to the R software. Taught the basics of the interface.
Gave theoretical understanding of tests such as Goodness of fit test and Chi-square analysis with Yate's correction then she demonstrated how to perform analysis using calculator and R software.
- **Session 2: (Day 1)**
Madam started session two with interesting covid examples for different tests.
She covered theory for tests like Sum, mean, mode, Median, Standard deviation and Variance followed by demonstration on Scientific calculator and R Software.
Madam gave few assignments to students for practice
- **Session 3: (Day 2)**
On second day madam started with some advanced statistical methods such as, Students t-test which was further divided in to analysis such as, Paired, Unpaired t-test and one sample, two sample t-test. For which again she taught codes using R software.
- **Session 4: (Day 2)**
In last session madam covered tests like, Correlation analysis, regression analysis and Analysis of Variance (One way-ANOVA). She demonstrated calculator method followed by R coding.
Question answer session was conducted for the benefit of students.
In valedictory session, few participants shared their valuable feedback with madam and expressed gratitude for enriching two days.
Lastly, Dr. Pramod Ghogare offered formal vote of thanks to the resource person for her valuable time, knowledge and experience with everyone.

G. Session and names of Resource Persons:

Workshop conducted in four sessions. Two session per day. Conducted by Dr. Leela Subramanian.

H. Expected outcome:

Students will develop skills to statistically analyse and understand biological data sets. This will be helpful for them for their own research works in future.

I. Amount Claim: Rs.6000/-

J. Photographs

Annexure:

- i. Detail of the Resource persons
- ii. List of Participants
- iii. Photographs of Seminar/Workshop

Report Prepared by

Signature :----- *m phadke*

Name : Dr. Manju Phadke

Department: Microbiology

Designation : Head of the department

**HEAD OF THE DEPARTMENT OF MICRO-BIOLOGY
S.L.S. COLLEGE OF ARTS, SCIENCE & COMMERCE
SION (WEST), MUMBAI - 400 022.**

Manju
signature of principal

Meeting Summary**Total Number of Participants**

51

Meeting Title

Workshop on "Development of Skills in Bio-Statistics to Analyse Biological DATA Sets" (Day 1: 2nd March 2022)

Meeting Start Time

3/2/2022, 2:35:21 PM

Meeting End Time

3/2/2022, 6:13:12 PM

Meeting Id

900319d3-8d5f-47ff-9c1f-e857cf6196c3

Full Name	Join Time	Leave Time	Duration	Email	Role	Participant ID (UPN)
Mrunal Shrikant Ramdas	3/2/2022, :	3/2/2022, :	13h 37m	mrunalr21@asc.sies.edu	Presenter	mrunalr21@asc.sies.edu.in
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Lynn D'lima	3/2/2022, :	3/2/2022, :	12h 45m	lynnd@sies.edu.in	Presenter	lynnd@sies.edu.in
Ankita Ramesh Tharakan	3/2/2022, :	3/2/2022, :	13h 35m	ankitat@asc.sies.edu.in	Presenter	ankitat@asc.sies.edu.in
Hera Azmi	3/2/2022, :	3/2/2022, :	13h 36m	heraa@sies.edu.in	Organizer	heraa@sies.edu.in
Haritha Ramesan Nair	3/2/2022, :	3/2/2022, :	13h 35m	harithan@asc.sies.edu.in	Presenter	harithan@asc.sies.edu.in
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Deepika Tambe	3/2/2022, :	3/2/2022, :	13h 32m	deepikat@sies.edu.in	Presenter	deepikat@sies.edu.in
Ratna Srinivasan Iyer	3/2/2022, :	3/2/2022, :	13h 32m	ratnai@asc.sies.edu.in	Presenter	ratnai@asc.sies.edu.in
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Pooja Maurya	3/2/2022, :	3/2/2022, :	13h 31m	poojam@sies.edu.in	Presenter	poojam@sies.edu.in
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Pramod Ghogare	3/2/2022, :	3/2/2022, :	13h 3m	pramodg@sies.edu.in	Presenter	pramodg@sies.edu.in
Manju Phadke	3/2/2022, :	3/2/2022, :	11h 25m	manjup@sies.edu.in	Presenter	manjup@sies.edu.in
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Dr Leela Subramanian (Guest)	3/2/2022, :3/2/2022, :3h 18m	Presenter
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Vaishali Kamble	3/2/2022, :3/2/2022, :4s	Presenter
Vaishali Kamble	3/2/2022, :3/2/2022, :1h 14m	Presenter
MAHALAKSHMI RAJASEKAR (Guest)	3/2/2022, :3/2/2022, :3h 3m	Presenter
VISHNU MURALIDHARAN NAIR	3/2/2022, :3/2/2022, :2h 48m	vishnu91579@asc.sies.e Presenter vishnu91579@asc.sies.edu.in
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Ganesh Ashok Chintakindi	3/2/2022, :3/2/2022, :15m 17s	ganeshc21@asc.sies.edu Presenter ganeshc21@asc.sies.edu.in
Vaishali Kamble	3/2/2022, :3/2/2022, :1h 48m	Presenter
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Meeting Summary

Total Number of Participants

45

Meeting Title

Workshop on "Development of Skills in Bio-Statistics to Analyse Biological DATA Sets" (Day 2: 3rd March 2022)

Meeting Start Time

3/4/2022, 2:50:09 PM

Meeting End Time

3/4/2022, 6:11:47 PM

Meeting Id

efe530f7-de43-41e0-a7b9-d8a895ff530a

Full Name	Join Time	Leave Time	Duration	Email	Role	Participant ID (UPN)
Ankita Ramesh Tharakan	3/4/2022, :	3/4/2022, :	13h 18m	ankitat@as	Presenter	ankitat@ascscs.sies.edu.in
Ratna Srinivasan Iyer	3/4/2022, :	3/4/2022, :	13h 17m	ratnai@asc	Presenter	ratnai@ascscs.sies.edu.in
Hera Azmi	3/4/2022, :	3/4/2022, :	13h 19m	heraa@sie:	Organizer	heraa@sies.edu.in
Pooja Maurya	3/4/2022, :	3/4/2022, :	13h 14m	poojam@si	Presenter	poojam@sies.edu.in
Haritha Ramesan Nair	3/4/2022, :	3/4/2022, :	13h 13m	harithan@:	Presenter	harithan@ascscs.sies.edu.in
IRAM HASAN SHAIKH	3/4/2022, :	3/4/2022, :	13h 13m	iram87738	Presenter	iram87738@ascscs.sies.edu.in
Mrunal Shrikant Ramdas	3/4/2022, :	3/4/2022, :	13h 13m	mrunalr21	Presenter	mrunalr21@ascscs.sies.edu.in
Riddhi Vikas Mhatre	3/4/2022, :	3/4/2022, :	13h 12m	riddhim@a	Presenter	riddhim@ascscs.sies.edu.in
Monika Satyendra Meheta	3/4/2022, :	3/4/2022, :	13h 12m	monikam2:	Presenter	monikam21@ascscs.sies.edu.in
Revathi Anilkumar	3/4/2022, :	3/4/2022, :	13h 12m	revathia@:	Presenter	revathia@ascscs.sies.edu.in
Mercy Pakiaselvi Charles	3/4/2022, :	3/4/2022, :	13h 11m	mercyca:	Presenter	mercyca@ascscs.sies.edu.in
MAHESH VENUGOPAL CHILIVE	3/4/2022, :	3/4/2022, :	13h 11m	mahesh86:	Presenter	mahesh86851@ascscs.sies.edu.in
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MAHALAKSHMI ALAGAMMAL	3/4/2022, :	3/4/2022, :	13h 13m	mahalakshi	Presenter	mahalakshmi108286@ascscs.sies.edu.in
Dr Leela Subramanian (Guest)	3/4/2022, :	3/4/2022, :	13h 7m	sannid893:	Presenter	sannid89356@ascscs.sies.edu.in
SANNID DAYANAND SHETTY	3/4/2022, :	3/4/2022, :	13h 9m	deepikat@	Presenter	deepikat@sies.edu.in
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Sheetal Mahesh Gupta	3/4/2022, :	3/4/2022, :	13h 7m			

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Dr Leela Subramanian (Guest)	3/4/2022, : 3/4/2022, : 1m 11s	Presenter	
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PRANJAL AVADHUT RAI	3/4/2022, : 3/4/2022, : 13h 1m	pranjal961: Presenter	pranjal96186@asc.sies.edu.in
SANJANA ARUNKUMAR VOJJIL	3/4/2022, : 3/4/2022, : 13h 1m	sanjana93: Presenter	sanjana93825@asc.sies.edu.in
DANISH IBRAHIM MOMIN	3/4/2022, : 3/4/2022, : 13h 1m	danish966: Presenter	danish96671@asc.sies.edu.in
MINOTI NITEEN UPASANI	3/4/2022, : 3/4/2022, : 12h 54m	minoti100: Presenter	minoti100784@asc.sies.edu.in
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SARANYA SATHEESAN PANTHA	3/4/2022, : 3/4/2022, : 133m 20s	saranya98: Presenter	saranya98414@asc.sies.edu.in
Miss Akanksha Shenoy	3/4/2022, : 3/4/2022, : 29m 41s	akankshas: Presenter	akankshas@sies.edu.in
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Pramod Ghogare	3/4/2022, : 3/4/2022, : 146m 20s	pramodg@ Presenter	pramodg@sies.edu.in
Manju Phadke	3/4/2022, : 3/4/2022, : 19m 47s	manjup@si Presenter	manjup@sies.edu.in

Total number of Participants :- 45

Staff members :- 6