



***5 Day Online Workshop on Bio-statistical Data Analysis
(19th to 23rd November, 2021)***

Organized by

**DEPARTMENT OF STATISTICS
ASSAM UNIVERSITY, SILCHAR:788011**

The Department of Statistics, Assam University, Silchar organized a 5 Day Online Workshop on Bio-statistical Data Analysis from 19th to 23rd November, 2021. Biostatistics is the science of managing empirical uncertainties in the domain of Life Science, Health Studies and Medicine. Biostatistics is receiving increasing attention in a wide range of disciplines which includes Biology, Medical Science research, Public Health etc. resulting from the availability of analytical tools and techniques required to capture and explain the cause of variability. The Bio-statistical analytical methods adopted includes quality assessment, cleaning, transforming and modeling data, which have been found to be particularly useful and prevalent in the design and analysis of medical and public health research studies. One of the most popular and friendly package available for doing such analysis is SPSS. Thus, the need of the hour is to train manpower with basic underlying theory and equipped them with analytical skills required for Bio-Statistical Data Analysis using SPSS. Accordingly, the online workshop was planned.

The Coordinator of the Workshop was Dr. Vivek Verma, Assistant Professor of the Department of Statistics, Assam University. The objective of the workshop is to train the participants with basic underlying theory and equipped them with analytical skills required for Bio-Statistical Data Analysis using SPSS. It comprised of lectures on Study designs, Data description, Ethical guidelines for a study, Descriptive statistics, Qualitative Data Analysis, Quantitative Data Analysis, Correlation, Regression (Linear and Logistic), Odds ratio, risk ratio, and confidence interval, and practical demonstration using SPSS package. The workshop was open to all Registered/enrolled Ph. D. students, faculty members of any recognized university/institute or researcher who is in need of learning about bio-statistical techniques as part of their research or academic studies can join.

The Event was conducted online using Zoom platform by using the link

<https://us02web.zoom.us/j/82494598734?pwd=UFJZNUJQM21GeHBSd1Rhc0NIQ2RZQT09>.

The list of applicants is provided below:

No.	Name	University/College /Institution	Department
1	Kumari Sandhya	RIMS	Anatomy
2	Anupriya	Patna University	Psychology
3	Neha Parashar	Montfort Institute of Advanced Studies	Counselling Psychology
4	Ashok Kumar Patel	DDUGU Gorakhpur	Psychology
5	Ankita Singh	Kalyan singh superspeciality cancer institute	Public health
6	Firdous Barbhuiya	Tata Institute of Social Sciences, Mumbai	Social Work (Public Health)
7	Ankita Tandon	Dental Institute, RIMS, Ranchi	Oral Pathology, Microbiology and Forensic Odontology
8	Jay Prakash	Rajendra Institute of Medical Sciences	Critical Care Medicine
9	Salman Salman Khan	Psg college of arts and science	Mathematics with computer application
10	Berhane Tewolde Tewolde	University of West Scootland	Business and Finance
11	Mayanglambam Banita Devi	Manipur University	Statistics
12	Anadya Prakash Tripathi	Assam University Silchar	Statistics
13	Rajkumari Lunphasana Devi	MANIPUR UNIVERSITY	BIOTECHNOLOGY
14	Mrinal Deka	Assam University	Statistics
15	Mriganka Chakrabarty	Bodoland University	Biotechnology
16	Nabaneeta Mahata	ABVIMS AND DR RMLH	Biochemistry
17	Birupakshya Paul Choudhury	Assam University, Silchar	Life Science and Bioinformatics
18	Dr. DAIMALU BARO	TINSUKIA COLLEGE	BOTANY
19	Aditya Madhab Baruah	Tezpur Medical College	Forensic Medicine
20	Rajiv Ranjan Das	Rims Ranchi	Pharmacology and therapeutics
21	Chayanika Deka	Pandit Deendayal Upadhyaya Adarsha Mahavidyalaya	Statistics
22	Alok	PATNA UNIVERSITY	STATISTICS
23	Khwairakpam Budha Singh	District Statistical Office, Bishnupur	Economics and Statistics Department, Government of Manipur
24	Joshua Khumlianlal	Institute of Bioresources and Sustainable Development	Microbial Resource Division
25	Priyanka Talukdar	Assam University	Statistics
26	Yoshodhara Mohapatra	CARE 'n' CURE	Homoeopathy
27	Moirangthem Lakshmipriyari Devi	Institute of Bioresources and Sustainable Development	Plant Resources
28	Rupjyoti Bordoloi	Rabindranath Tagore University, Hojai, Assam	Economics
29	Dharmeswar Barhoi	Male	Assam University, Silchar
30	Sweety Nath Barbhuiya	PATHARKANDI COLLEGE	DEPARTMENT OF ZOOLOGY
31	S.Pravin	ICMR-NIE	Bio-statistics
32	Lourebam Neroka Devi	Manipur University	Department of Statistics
33	Animekh Hazarika	Assam University	Department of Ecology and Environmental Science
34	Bandana Kurmi	ASSAM UNIVERSITY	ECOLOGY AND ENVIRONMENTAL SCIENCE
35	W Reshmi Singha	Assam University	Ecology and Environmental Science

	Singha		
36	Jintu Kumar Bania	Assam University	Ecology and Environmental Science
37	Prattay Guha Sarkar	Rajendra Institute of medical sciences	Cardiology
38	Shishir Kumar	Rajendra Institute of Medical Sciences, Ranchi	BIOCHEMISTRY
39	Mukesh Kumar Niraj	RIMS, Ranchi	Biochemistry
40	Uttam Kumar Majumder	Khulna University	Statistics
41	Rajat Nandi	ASSAM UNIVERSITY	MICROBIOLOGY
42	Moirangthem Arun Singh Chingtham	MANIPUR UNIVERSITY	STATISTICS
43	Manoshi Phukon	Umshyrpi College	Mathematics
44	R Worthing Zimik	Manipur University	Statistics
45	Nabanita Maity	ASSAM UNIVERSITY, SILCHAR	BIOTECHNOLOGY
46	Longjam Roshini Chanu	Manipur University	Statistics
47	Kasturi Bhattacharjee	ASSAM UNIVERSITY, SILCHAR	BIOTECHNOLOGY
48	Sushma Kumari	RIMS, RANCHI	Biochemistry
49	Sanasam Thoibi Devi	Manipur University	Biotechnology
50	Chanambam Rajiv Mangang	Manipur University	Statistics
51	Pavithra	Mangalore university	Botany
52	Ansuman Ray	CALCUTTA UNIVERSITY	A. K. C. S. I. T. Rajabazar Science College.
53	Sankar Goswami	Gurucharan College	Department of Statistics
54	Thomas TK Tungnung	Manipur University	Biotechnology
55	Smitakshi Barua	Assam down town University	Statistics
56	Mala Manral	All India Institute Of Medical Sciences	cardiothoracic and Neuroscience Centre
57	Afrin Yasmin	Assam University Silchar	Life science and Bioinformatics
58	Jyothi Rani S.A	OSMANIA UNIVERSITY	STATISTICS
59	Tushar Kumar	Rajendra institute of medical sciences, Ranchi. Jharkhand.	Anaesthesiology
60	Wangkhem Jibol Chingmeirong	Institution	Community Medicine

The event started at 1.30 PM with a welcome address by Dr. Rama Shanker, Associate Professor & Head of the Department of Statistics, Assam University, Silchar. An enlightening and path awakening beautiful speech was given by the Honourable Chief Guest of workshop Padma Shri Prof. (Dr.) Kameshwar Prasad, Director, Rajendra Institute of Medical Sciences, Ranchi.

As many as thirteen resource persons delivered their talks on various topics in the workshop and the schedule of the training program is included below:

Name of resource persons		Affiliation
	Prof. Hafiz T.A. Khan	University of West London, United Kingdom
	Prof. S.N Dwivedi	AIIMS, New Delhi, India
	Prof. Dibyojyoti Bhattacharjee	Assam University, Silchar, Assam, India
	Prof. Kishor K. Das	Gauhati University, Assam, India
	Prof. Dr. Satish Chandra	RIMS Ranchi, India
	Dr. Ram Bajpai	Keele University, United Kingdom
	Dr. Ramesh Vishwakarma	European Organisation for Research and Treatment of Cancer, Belgium
	Dr. Ashwani Kr. Mishra	AIIMS, New Delhi, India
	Dr. Atanu Bhattacharjee	Tata Memorial Centre, Mumbai, India
	Dr. S. B Singh	RIMS Ranchi, India
	Dr. Dharmendra Dubey	Sharda University, Uttar Pradesh, India
	Dr. Ganesh Chauhan	RIMS, Ranchi, India
	Dr. Amit Kumar	RIMS, Ranchi, India



**Schedule for the 5 Days Online Workshop on
Bio-statistical Data Analysis
November 19th- 23rd, 2021**

Date	Timing	Topic	Speaker
Day 1			
19.11.2021	1.30-2.00 PM	Inaugural Ceremony	
	2.00-2.50 PM	Study designs	Prof. Sada Nand Dwivedi, AIIMS, New Delhi, India
	3.00-3.50 PM	Data Structure and description	Prof. Kishor K. Das, Gauhati University, Assam, India
	4.00-4.50 PM	Data Storage	Dr. Ganesh Chauhan, Scientist, RIMS, Ranchi, India
Day 2			
20.11.2021	2.00-2.50 PM	Data Entry and Cleaning	Dr. Amit Kumar, Scientist, RIMS, Ranchi, India
	3.00-3.50 PM	Data Analysis methods	Prof. Hafiz T.A. Khan, University of West London, United Kingdom; Visiting faculty for the Department of Statistics, AUS
	4.00-4.50 PM	Mixed Method of Analysis	
Day 3			
21.11.2021	2.00-2.50 PM	Qualitative Data Analysis	Dr. Ram Bajpai, Keele University, United Kingdom
	3.00-3.50 PM	Linear and Logistic Regression	Dr. Ashwani Kr. Mishra, National Drug Dependence Treatment Centre (NDDTC), AIIMS, New Delhi, India
	4.00-4.50 PM	Longitudinal Data Analysis	Dr. Atanu Bhattacharjee, Tata Memorial Centre, Mumbai, India
Day 4			
22.11.2021	2.00-2.50 PM	Correlation	Dr. Ramesh Vishwakarma, European Organisation for Research and Treatment of Cancer, Belgium
	3.00-3.50 PM	Quantitative Data Analysis	Dr. Amit Kumar, Scientist, RIMS, Ranchi, India
	4.00-4.50 PM	Survival Analysis	Prof. Dibyojyoti Bhattacharjee, AUS, Assam, India
Day 5			
23.11.2021	2.00-2.50 PM	Ethical guidelines for a study	Prof. (Dr.) Satish Chandra, RIMS, Ranchi, India
	3.00-3.50 PM	Odds ratio, and risk ratio	Dr. Dharmendra Dubey, Sharda University, Uttar Pradesh, India
	4.00-4.50 PM	Confidence interval	Dr. (Lt Col) Arun Kumar Yadav, Armed Forces Medical College, Pune, India
	5.00-5.30 PM	Valedictory Session	

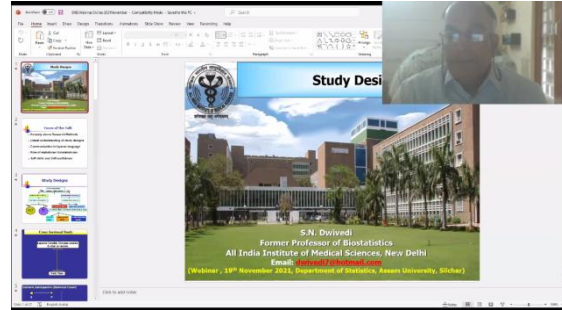
A special talk on the topic “Scope of Systematic Review and Meta Analysis in Research” was delivered by the Honourable Chief Guest of workshop Padma Shri Prof. (Dr.) Kameshwar Prasad.

During the valedictory program the Chief Guest Prof. Niranjana Roy, Professor, Department of Economics, Assam University, Silchar delivered a remarkable and inspiring speech and on the last session of the last day of the workshop. The participants’ whole heartedly expressed their satisfaction about the contents, management, and academic deliberations.

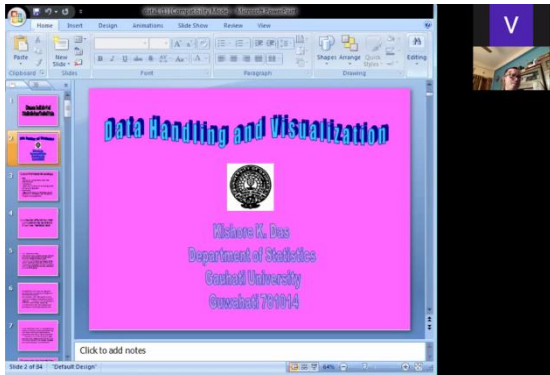
Some screenshot of the event are provided below:



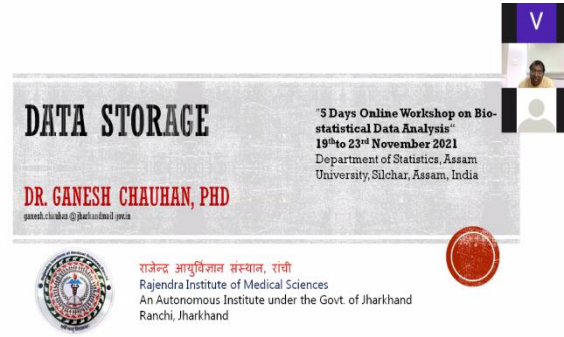
Chief Guest Padma Shri Prof. (Dr.) Kameshwar Prasad delivering during the Inaugural Session



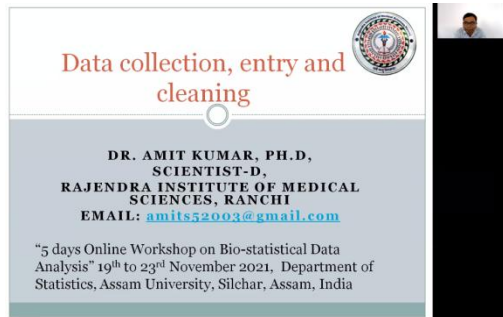
Prof. S.N Dwivedi delivering lecture on Study Design



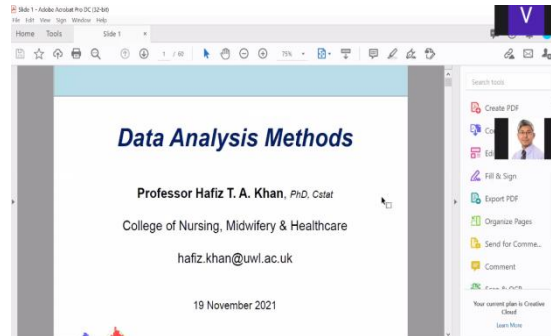
Prof. Kishor K. Das delivering lecture on Data Structure and description



Dr. Ganesh Chauhan delivering lecture on Data Storage



Prof. Kishor K. Das delivering lecture on Data Entry and Cleaning



Prof. Hafiz T.A. Khan delivering lecture on Data Analysis methods

Qualitative (or Categorical) data

Qualitative data

- Nominal**

Categories without any natural order or ranking

 - genotype
 - blood group
 - gender
 - Race
 - eye colour
- Ordinal**

Categories with some natural order or ranking

 - socio economic status
 - education level
 - satisfaction rating
 - Disease stage
 - Age group

Note: These data are better represented by frequencies and percentage.

Keele UNIVERSITY

Dr. Ram Bajpai delivering lecture on Qualitative Data Analysis

All India Institute of Medical Sciences (AIIMS), New Delhi

National Drug Dependence Treatment Centre (NDDTC), AIIMS

Ashwani Kumar
Additional Professor
NDDTC, AIIMS
New Delhi

Dr. Ashwani Kr. Mishra delivering lecture on Linear and Logistic Regression

Tata Memorial Centre
Introduction

I II III IV

Dr. Atanu Bhattacharjee delivering lecture on Longitudinal Data Analysis

Systematic Review and meta-analysis: an Introduction

Dr. Kameshwar Prasad
Professor of Neurology & Director
Rajendra Institute of Medical Sciences, Ranchi
Former Head of Neurology and Chief, Neurosciences Centre
All India Institute of Medical Sciences, New Delhi
Editor, Cochrane Stroke Review Group

Chief Guest Padma Shri Prof. (Dr.) Kameshwar Prasad delivering special lecture on Systematic Review and Meta Analysis

PRINCIPLES OF ETHICS

Ethics involves four basic principles that include

- ▶ Non-maleficence
- ▶ Beneficence
- ▶ Autonomy
- ▶ Justice

Rai R, et al.: Ethics in Biomedical Research

Prof. (Dr.) Satish Chandra delivering lecture on Ethical guidelines for a study

Confidence interval

Let us start with
What is your understanding of Confidence interval?

Dr. (Lt Col) Arun Kumar Yadav delivering lecture on Confidence interval



Chief Guest Prof. Niranjana Roy delivering during the Valedictory Session



Dr. Rama Shanker, HoD during the Valedictory Session

Rshanker
(Dr. Rama Shanker)
Head, Department of Statistics,
Assam University, Silchar
