Department of Statistics,
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Report of the Training Course on Innovative Research
Dimensions and Data Analysis in R

16th to 22nd January, 2018

As a part of the ongoing training programmes, the Department of Statistics, Assam University organized a *Training Course on Innovative Research Dimensions and Data Analysis in R* for 7-days during January 16-22, 2018 at Assam University, Silchar. The program was run by the registration fees from the participants, some resources shared by the university and fund from the annual course fee of the department.

The Workshop cum Training program was designed to orient Faculty members and Researchers in data analysis and programming from basic to advanced level. The program was a mix of imparting knowledge through programming in R and the use of in-build functions in R.

The Workshop cum Training program inculcated confidence in the participants about the usage of statistical data analysis and programming in R that shall modify their way of encountering research data.

The prime concern of this Workshop cum Training program is to showcase the participants some recent advances in the field of statistical research and the process of analysis of data in R. Starting from very basic some of the advanced statistical techniques both through R-programming and R-commands shall be on display in the workshop.

The design of the program is to inform the participants on the following topics:
  i. Some advanced research directions in Statistics
  ii. Data management in R and Matrix Algebra
  iii. Descriptive Statistics, Graphics and Inferential Statistics in R
  iv. Performing basic statistical analysis and graphics in R
  v. Regression in R-Linear, Curvilinear and Logistic
  vi. Design and analysis of experiments, Fitting of statistical distributions and Multivariate analysis in R
  vii. Survival analysis and Numerical Analysis in R

The list of speakers are as follows:
- Prof. Bimal K. Sinha, University of Maryland, USA
- Prof. Bikas K. Sinha, Retired Professor, ISI, Kolkata
- Prof. Kishore K. Das, Gauhati University
- Dr. Sahana Bhattacharjee, Gauhati University
- Dr. Hemanta Saikia, Assam Agricultural University, Jorhat
- Dr. Tanusree Deb Roy, Assam University

- Dr. Jonali Gogoi, Assam University
- Ms. Shambi Deb, Ramanuj College, Silchar
- Prof. Dibyojyoti Bhattacharjee, Assam University

The target participants for the workshop was faculty members and research scholars working in any recognized university/institute or any researcher who is in need of learning R programming or data analysis in R. A brief details of the participants can be seen in the table below. There were 39 participants in the entire program out of which eight were from outstation. All the participants were provided with conference kit, light refreshments in the morning and evening and working lunch.

Name	Affiliating Institution	Designation	Subject
Md. Saiful Islam	Assam University	Research Scholar	Computer Science
Inzamul Ahmed	Gauhati University	Research Scholar	Statistics
Suchismita Das	Assam University	Faculty	Life Science
Parag Shil	Assam University	Faculty	Commerce
Navajit Borah	Dakshin Kamrup College	Faculty	Commerce
Arindam Roy	Assam University	Faculty	Computer Science
Manish Kumar Pandey	Assam University	Research Scholar	Statistics
Girin Saikia	Gauhati University	Research Scholar	Statistics
Priyanka Talukdar	Assam University	Research Scholar	Statistics
Rakesh Yadav	SCMHRD	Faculty	Management
Upama Deka	NEHU	Research Scholar	Statistics
Subrata Das	S S College	Faculty	Mathematics
Debtosh Chakraborty	S S College	Faculty	Statistics
Suchismita Das	Assam University	Research Scholar	Biotechnology
Bireshwar Bhattacharjee	Assam University	PG Student	Statistics
Moutushi Debnath	Assam University	Research Scholar	Statistics
Moirangthem Manorama Chanu	Assam University	Research Scholar	Commerce
Brajesh Kumar	Assam University	Faculty	Commerce
Dr. G Albin Joseph	Assam University	Faculty	Social Work
Indrajit Mazumder	Assam University	PG Student	Statistics
Gulzar Ahmed Mazumder	Assam University	PG Student	Statistics
Sagarika Dey	Assam University	Faculty	Economics
Puranjan Chakraborty	Assam University	Research Scholar	Commerce
Nilanjan Mazumder	Assam University	Research Scholar	Business Administration
Rojini Athokpam	Assam University	Research Scholar	Life Science
Pankaj Phukan	Assam University	Research Scholar	Life Science
Dr. Hilloljyoti Singha	Assam University	Faculty	Ecology & Env sc
Nilakshi Devi	Assam University	Research Scholar	Ecology & Env sc
Himangshu Dutta	Assam University	Research Scholar	Ecology & Env sc
Akan Borhai	Assam University	Research Scholar	Life Science

Name	Affiliating Institution	Designation	Subject
Suraj Goswami	Assam University	PG Student	Statistics
Santanu Choudhury	G C College	Asstt Professor	Statistics
Muqutadir Hussain Barbhuiya	MHCM Sc College	Asstt Professor	Statistics
Rosy Swami	Assam University	Research Scholar	Computer Science
Kingshuk Adhikary	Assam University	Asstt Professor	Commerce
Apratim Nag	G C College	Asstt Professor	Physics
Jaydeep Paul	G C College	Asstt Professor	Chemistry
Navnita Kumari	MDDM College, Muzaffarpur	Asstt Professor	Physics
Durlov Jyoti Kalita	Assam University	Research Scholar	Ecology & Env sc

The broad topics covered in the workshop comprised of discussion on-

- Basic Fundamentals: Descriptive Statistics and Tabulation
- Data Management and data frames: Data handling, Matrices, Importing data
- Graphics and plots
- Test of Significance
- Regression: Logistic, Multiple, Linear and Non-linear
- Design of Experiments: ANOVA- one-way, two-way, ANCOVA
- Statistical Distributions
- Cluster analysis
- Discriminant analysis
- Survival analysis
- Time Series
- Numerical Integration

The highlights of the program included the inclusion of the Famous Twin Brothers of Statistics Prof. Bimal K. Sinha from United States and Prof. Bikas K. Sinha from ISI, Kolkata as resource person. All the speakers provided sufficient handouts and study materials for the participants and encouraged them to continue the application of R-package for data analysis instead of any other statistical package. The organizers provided all the study materials in CDs to the participants. In the closing day of the program participants provided feedback on prescribed format on the quality of deliberation of the resource persons and the overall management of the training program. Certificates were distributed to all participants and the participants also shared their experience, the wisdom that they gathered in the workshop and provided some suggestions for further improvement.

Some glimpses of the workshop are as below:

The Famous Prof. Sinha twins were the Resource Persons of the Workshop

Group Photo on the last day of the workshop

Plantation by Prof. Bimal Sinha during the workshop

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